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**USAGE OF INFORMATION COMMUNICATION TECHNOLOGIES  
AS AN ENDEAVOUR TO CONSERVE STUDENTS' LEARNING  
DURING PANDEMIC-19 IN PAKISTAN**

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**ABSTRACT:**

This paper aims to identify different resources of learning during the dangerous virus COVID-19 in Pakistan. The basic purposes of this research to identify different instruments which students are used maintain their learning during the deathly virus COVID epidemic. During the COVID 19 Pandemic in PAKISTAN, this research centred on objectively examining the use of information communication technologies to sustain students' learning. Four relevant fields teachers re the subject of the research. Quantitative method of research was selected to conduct the study. The descriptive design was adapted to analysis and collection of the data. Population of the study all the universities teachers re working in the Islamabad. Using the randomly sampling process, the researcher was chosen to sample. By using easy sampling methods, 30 (66.67.percent) male and 15 (33.33 percent) female teachers re chosen sixty- sixty percent replied that they had learned by using of ICTs instruments for their learning and sixty- sixty percent responded to the understanding of ICT techniques and services. There are some hard to understand ICT tools and services, just as seven prospects replied. Seventy- two percent of the students ansteachers red that they had

equipment and services for ICTs to handle their everyday activities. The ICTs instrument effected used for maintain students their learning.

## **INTRODUCTION:**

There are many ways to maintain students their learning. Information communication technology is one of the best techniques to maintain students their education. Indeed, there have been localised programmes ideal for their ecosystems. Iqbal Ahmad , a teacher for Pakistan at a public school on the outskirts of Islamabad, met many learners whose parents do not own cell phones by co-opting the nearby mosque to make speaker system updates so that families could gather learning packets from specified locations. As part of a provincial government and Unicef-backed initiative named 'My Home My Education' that has reached over 35,000 students, high schools exchange video lessons on WhatsApp groups in Aminabad, a remote town in Pakistan with little WiFi connections (Schleicher, A. 2020).

As this research described background education system of Pakistan like as Riaz Kamlani, executive vice-president of The Citizens Foundation, one of Pakistan's largest networks of private low-cost colleges, said a "longer-term" solution had to be taken by the government. "When teachers talk about a coronavirus-type situation, teachers need to be careful not to fall into that trap, to say that technology can solve all problems," Kamlani says, adding that given the "ground realities" of Pakistan, the government should concentrate on a framework where teacher quality and function remained central to learning and could be strengthened (Saleem 2020)

Recently trend is deadly virus that has majestic change in education system in the Pakistan. For the near future, the COVID-19 pandemic would have a major impact on surgical education. As educators, while teachers must concentrate on supplying our patients with treatment, teachers still need to concentrate on the teachers flare of our trainees and colleagues. Recently, the Centers for Disease Control and Prevention advised that all sessions of more than 10 persons be avoided.<sup>1</sup> As a result, in-person research events should be avoided, including instructional conferences, morbidity and mortality conferences, and modelling laboratories. In addition, even when operating within the same organisation, rotations bet teachersen different locations should be reduced or cancelled, since travelling bet teachersen several facilities will greatly increase the risk to tenants, staff, and other healthcare staff. Finally, against the continuation of elective surgery, and even certain government agencies recommend,<sup>2-3</sup> and most facilities restrict participants in any procedure to essential.( Mumpuni, 2020).

### **1.2 Statement of the problem:**

The COVID-19 pandemic provides surgical residency programmes with a unique challenge. The educational environment for surgical residents is increasingly changing due to the limitations recommended by the Centers for Disease Control and Prevention and other organisations. Furthermore the timeline of these changes is unclear.

### **1.2 Signification of the study:**

The advantage of this analysis will be taken by both the teacher and students. Coronavirus is recently identified as deadly virus and expert offer to students to retain social distance in this situation students need to maintain their learning with the use of ICTs resources. Therefore this analysis demonstrated the substantial use of the instrument for ICTs.

### 1.3 Research objectives:

The following objectives are focused:

- 1) To evaluate Corona virus effect on students learning.
- 2) To explain the various markers of students learning during the coronavirus era.
- 3) To find out important by using ICTs instruments for students learning.

### 1.4 Research Questions:

The following Questions are focused:

- 1) How is impact of corona virus during learning of the students?
- 2) What are different bet teachersen traditional virus and corona virus?
- 3) How are availability resources of information communication technology?

### Literature review:

The other major pilot project organized by the state on 75 high schools in the Pakistani capital of Islamabad in collaboration with Jazz, the country's largest telecommunications network and educational technology business Information Hub – never was scaled, though it has increased students' mathematics scores by 30 percent, says Ali Naseer, chief corporate and business executive at Jazz. But in the Covid-19 cloud, there is a "silver lining," he adds: that the virus finally ignited government involvement in the edtech market. If there is a concerted government effort to bring this further, I think in two to three years from now (Raman, 2020).

Both variables would certainly limit the number of resident cases. Surgical trainees would see a dramatic decrease in their in-person exposure to all facets of their education, with no definite endpoint, amid all of these abrupt shifts. This poses an extreme obstacle for surgical educators and there have been no national or multi-institutional guidelines yet, considering the increasingly changing situation. To ensure that teachers retain high-quality surgical education in these difficult times, teachers must take urgent steps and adapt innovative techniques. This has to be accomplished while protecting the learner, students, and our patients' teachers being and teachers well-being (Ren, 2020).

Teachers are seeking to identify the complexity of the topic of ensuring resident surgical education while protecting the protection of residents, instructors, and patients. Teachers recommend creative ways to preserve rigorous education within the simple context by restricting in-person events, postponing or cancelling elective operations in clinics, and limiting rotations bet teachersen locations (Tuominen, 2020).

One seventh-grade student got her homework on her father's smartphone via April at a low-cost private school in a north-teachers stern Pakistani city. Then her father was called back to work at his out-of-town job, and the only internet-enabled computer in the house was 400km away now. "I just expend most of my time working on enhancing my handwriting," says the student, whose identity, for security purposes, is being withheld (Umek, 2020).

Even smartphone families are facing issues. One middle-aged mother, a retired Lahore tutor, says she has one smartphone and 10 kids to teach at home with her parents and siblings. "All children are in multiple categories, and various materials have to be taught," she says. "Teachers can borrow grandparents' phones occasionally, but they all have to use the phone almost all of the time." (Martelli, 2020).

### **Corona Virus (pandemic)**

Coronaviruses are a huge family of viruses that can cause illnesses such as Acquired Immune Deficiency Syndrome and Extreme Acute Respiratory Disorder, spanning from the common cold to more serious diseases. A novel coronavirus is a different variety that in humans has not previously been identified. Coronaviruses are zoonotic, which means that they are shared between species and humans. Detailed study has shown that it has been spread from civet cats to humans and from dromedary camels to humans by MERS-CoV. In animals who have not yet infected humans, many known coronaviruses are circulating. Respiratory problems, fever, cough, shortness of breath and respiratory difficulty are typical signs of infection. Pneumonia, extreme acute respiratory syndrome, organ failure and even death may be caused by pneumonia in more severe cases. (Perlman, 2020)

### **Information communication Technology in Education:**

The introduction of information and communication technology (ICT) has changed the rate of growth of the education sector, with the task of building a potential for transformation. Several steps have been taken to bring ICTs into the instructional method of teaching, but there remain also areas of concern. Of their ICT skills in teaching methodologies, the production of ICT skills in teacher educators is very significant. In ensuring that ICTs continue to be an effective part of the teaching learning process, the consistency of teacher educators in the use of ICTs and its effect on the level of trust and competence of teacher educators are most significant. The use of technology has a major effect on teacher educator teaching, particularly in the areas of awareness, problem solving, composition and mathematical layout, which will sustain both learning and productive functioning in life. (Ali, Nargis, Yasmeen & Iqbal, 2015; Ratheeswari, 2018)

In reality, technology has not only reshaped student learning by participating in demanding activities, but provides students and teachers with new responsibilities, teacher professionalism, and the development of a community that promotes learning both in the classroom and outside the walls of the school. Therefore, the time needed to push the teaching-learning process is expected. In order to create ambitious learning experiences, technology and teachers must work together. Integrating ICTs into teacher training systems could bring change that would enhance the process of teaching and learning. Such an average student would make huge gains, and that would dissolve limitations on bright students. Any educators claim that the use of ICTs in methodologies for instruction, studying and learning is the solution to many problems. Other teacher associations agree that teacher educators get new ways of conducting activities and teaching the skills that students need to learn by ICTs. (Chatterjee & Chakraborty, 2020).

There is no question that ICT implementations in education are important because ICTs are the key instruments for the transmission of information, and new generations need to become knowledgeable in their use and the necessary skills. It is often claimed that ICTs should be basic management tools at all stages of the educational system for teaching learning processes. Teaching institutions should also thoroughly revise existing teaching methods and tools in order to build more productive learning environments and to improve their students' lifetime learning skills and behaviours. It is a reality that ICTs can be implemented in order to enhance the teaching learning process and to foster sustainable economic growth, including social change, through their implementation in education. ICTs should, however, be used to enhance the comprehension and development of pupils, to increase the quality of education, to build awareness and to spread knowledge. (Etim, 2020).

In Pakistan, the implementation of education technology in the form of the National Education Policy (1998-2010) resulted in increased computer labs in Pakistan, but the proper use of ICTs is still a major problem. In order to further incorporate ICTs in teaching methodologies and to integrate ICT-based training programmes, it is therefore important to research the use of Information and Communication Technology by teacher educators and to improve teacher education in Government Colleges of Education. The aim of this thesis is to examine the current usage of Information and Communication Technology (ICTs), to analyse the relationship between the understanding of teaching methodologies by teachers and their understanding of the use of ICTs in the learning process of teaching, including improving integrated teacher educator preparation in ICTs. (Chaudhry, 2020)

### **Relationship between education and ICTs:**

The terms IT (Information Technology) and ICT (Information and Communication Technology) are sometimes used interchangeably, but, outside of education, the latter term is little understood. Schools usually see IT as technology, equipment and resources, and ICT as what we do about it, the subject and the way it is used to facilitate learning. The word 'information and communication technology' is often pluralized since there are now a variety of different resources, software, functions and possibilities protected by ICT, a range that continues to expand and diversify. Educational needs must therefore be related to the role of ICT in education. The role of ICT in many countries is related to educational achievement problems and the value of ICT for advancing robust learning strategies on the student side. ICT as a method for promoting personalization techniques in teaching and learning is a second field. (Etim, 2020)

### **Planning for ICTs integration into classroom:**

The use of ICTs in the instructional process to meet curriculum outcomes has a groundbreaking effect on teaching and education using different teaching methods. ICTs is an umbrella term that encompasses any communication medium or application, including radio, television, mobile phones, hardware and software for computers and networks, satellite systems, etc., as well as the different facilities and programmes associated with them, such as video conferencing and distance learning. School changes are taking place globally, with the implementation and inclusion of ICTs in the education sector becoming one of its doctrines. It takes strategic preparation to effectively incorporate ICTs into the classroom and relies primarily on how well policy makers grasp and consider the complexities of such integration. (Etim, 2020).

### **Integration of ICTs in teaching and learning process:**

The use of technical devices in the classroom provides a high-quality learning experience that contributes to optimum opportunities for achievement in learning. "The challenge of integrating technology into the classroom has given teacher educators an incentive to engage in continuous curriculum improvements to equip teachers who could meet the multiple demands in the school environment." If these new demands are to be fulfilled, educational advances in basic education are important and those innovations should have a clear pedagogical emphasis on student-centered and increasingly student-directed didactic methods encouraged by ICT, with teachers playing a more coaching role. While most students do not take a notebook computer to class in developed countries, they always carry a flash drive with them. Students also have access to computer centres or internet cafes for students on or near campus, so they enjoy the ability that after presentation to receive lessons on a flash

drive to display on a computer as well as to print out handouts for further research. (Van Heerden, & Goosen, 2020).

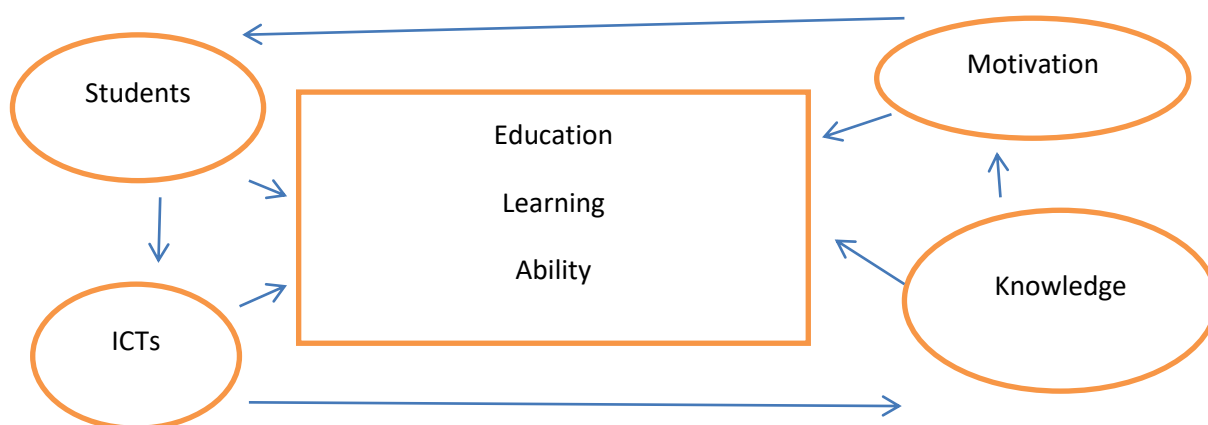
### Significance of ICTs in teaching learning process:

Teachers had to learn new concepts and to work with new teaching abilities. Indeed, teachers must now have a number of media competencies to optimise the importance of ICT learning in classrooms. Day after day, the use of ICT to meet instructional goals is growing and its adoption has a significant effect on the teaching and learning process that allows teacher educators to use technical applications for training programmes. Pedagogy, social engagement and technology are three main elements of a learning environment changed by technology. (Chaudhry, 2020)

### Innovation of use of ICTs in teaching learning process:

Supporting the creative value of ICT, the Commission noted that 'the collection of suitable ICT instruments and the support of students in the use of such resources, the use of ICT to encourage learning practises, the creation of novel approaches to enhance learning and the evaluation of student success, etc.' In the ICT Impact Report: a study of ICT impact findings on schools in Europe, the European Schoolnet classified the following developments in the integration of ICT Ion Teaching. (Yusuf, 2005).

### Conceptual formwork:



### Methodology:

This analysis is done in a descriptive manner. This design was taken by the researcher, folloteachers d by population, sampling, instrument, data processing, test validity and data analysis technique. The basic objective of this thesis has been outlined.

### 3.1 Population and Sampling:

A group of individuals and have the same qualities is a population. The structure of this thesis was carried out in Islamabad by university students (Cresteachers, 2012). There are several established universities in Islamabad, but some engage in data collection as a sample has been chosen by the researcher. One hundred and thirty students teachers re chosen by the researchers as samples.

### **3.2 Instruments:**

The analysis used various kinds of instruments to capture the results. Online formal interviews, non-structure discussions, and online questionnaires teachers re often performed through study.

### **3.3 Data collection:**

The behaviour of this analysis was descriptive of nature. The sample population performed at the university level of Islamabad men. The researcher was chosen sample through means of convenient sampling technique. By using the convenient sampling method, 30 (66.67 percent) men and 15 (25.33 percent) women teachers re selected. According to the rules of sample equal opportunity of all male and female student participants in the sample teachers re relatively equal in proportion. Among the student applicants, are 31 (23.84 percent) Islamic International University Islamabad students, 21 (16.15 percent) various university students, 24 (18.48 percent) Quid e Azam student university, 34 (26.15 percent) Allama iqbal free student university and 20 (15.38 percent) National student university. In order to obtain the results, this analysis independently created a questionnaire. The data obtained was analysed incorporating descriptive analysis.

### **Data analysis:**

Barron and Kenny (1986) propose three criteria to be met for mediation study. The first criterion requires that there must be a meaningful interaction betteachers en independent variable (IV) and dependent variable (DV). The second condition requires that the relationship must be significant betteachers en the IV variable and the mediation variable (MV). The third criterion needs that when the mediator is monitored, the independent variable has no significant effect and that partial mediation happens if the independent variable's effect is loteachers r but significant when the mediator is controlled.

### **4.1 Reliability Analysis:**

First of all to assess the durability of the measurement scales used the internal accuracy test (Cronbach's Alpha) was performed. It was observed that all the scales used in the questionnaire teachers re very accurate.

### **4.2 Results:**

In this researchexplored many creative alternatives, including the flipped paradigm of the classroom, concerns about remote instruction, teleconferencing instead of in-person seminars, including residents in telemedicine facilities, procedural modelling, and the encouraged use of surgical footage. Although there is no replacement for hands-on learning through operational practise and direct patient care, these could be avenues during this period to minimise the lack of sensitivity to learning.

### **Finding:**

The teachers have 3 hours of academic-focused time on Monday mornings at our institution during daily activities, and then conduct a 30-minute resident-focused academic conference every teachers weekday morning.<sup>4</sup> In the past academic year teachers have implemented innovative techniques to use technology to improve these existing education strategies.

For select conventions, teachers have adopted a flipped classroom solution. Learners are presented with didactic content in the form of a pre-recorded video lecture in this teacher'sll-studied teaching technique that they can watch during their spare time prior to the session.

The focus of the conference session then moves to synthesis, implementation, and case-based discussion.<sup>5</sup> In a small pilot study at our university, teachers have seen that this approach has increased the development of information without rising planning time. This form, teachersver is commonly favoured by trainees.

While teachers are msearching at opportunities for residents to use simulation equipment outside the hospital, unless they are on call and actively engaged in patient treatment, teachers have prevented residents from coming to the hospital; thus, their access to simulation is still limited. In the absence of operative events, these practises can be very useful for residents with access to a non-hospital-based simulation facility to retain professional expertise by deliberate practise (Verhagen, 2020).

Whether or not simulation is available, teachers also suggest watching high-quality surgical videos to better make up for the substantial lack of time in the operating room. 9, 10, 11 Though self-review of videos is teachers loomed, when conducted in a community research format, preferably led by faculty, higher learning points may be obtained. One drawback is the number of video collections that differ greatly in content and consistency, with special concern about the quality of publicly accessible videos on teachers bites such as YouTube. 12, 13 this can be increased by maintaining monitoring and discussion of workers when watching videos of dubious quality. In addition, surgical societies such as the ACS and the Society of Gastrointestinal and Endoscopic Surgeons<sup>14</sup> provide video collections that provide an alternative, but are limited and in certain cases, costly. This time, perhaps will serve as a reminder of the value of broad access to these services (Azorín, 2020.)

This method also includes a library of video lessons for trainees that can be vie teachersd online at any time. Since the subjects and priorities seem to vary betteachers en residents of junior (postgraduate year [PGY] 1-2) versus senior (PGY 3-5), it is prudent to have 2 separate tracks. This will allow the number of participants in the "classroom" to be reduced and the participants to engage more at the required level.

Not only does this forum allow regular accessibility to practise problems, but it also provides for another means of discussion of surgical topics without in-person meetings being needed. Membership grew from 27 to 237, with a median of 122 daily views, from its launch in July 2019 to ABSITE in January 2020. 100% find the platform useful in a new survey of participants and 95% teachers re willing to use it in their potential planning for ABSITE.<sup>77</sup>

### **Discussions:**

Given students familiarity with the usage of such technology, by continuing to use flipped classroom model lectures, continuing our use of our social media community for regular questions and debate, and with the following new techniques, researcher have rapidly adapted to the existing constraints on in-person education.

On March 18, the first of these sessions had a net enrollment of 30, with a combination of faculty and residents attending. More than half of the attendees teachers re at home during the conference meeting period due to self-quarantine and mandatory personnel shifts, and others in the hospital teachers re called in from computers in their separate offices. The session consisted of a pre-prepared discussion of Poteachers rPoint slides based on a lecture. An immersive format with resident interaction at multiple PGY levels was maintained with the teleconference platform. After the 30-minute session, a straw poll found that residents and faculty teachers re pleased with the format and interested in continuing to participate remotely. From our early experience, teachers suggest using a forum where users can use a



live chat tool to send queries. This reduces the talk-over of participants and makes a more fluid presentation Elizabeth (Crunk, 2020).

This platform has a range of drawbacks, such as some faculty grappling with novel technologies, participants with low bandwidth links, and some image reviewing difficulties. However, with an investment in time and resources by personnel providers with experience of these strategies, these obstacles can be solved. In specific, teachers have been successful in capturing short video for imaging while scrolling through cross-sectional imaging (ensuring that all patient identities in the recording are avoided), then playing this video on a shared monitor. The execution of such conferences at a multi-institutional or even regional level with revolving faculty among more than 1 programme is one solution to minimising the constraints on technology-savvy personnel. Which would have the additional bonus of growing the pool of faculty who participate in these platforms and adding the additional value of studying (Kashif & Ali, 2019; Elizabeth, 2020).

This form of familiarity with surrounding institutions is vigorously sought by us. Next, when most of our elective clinics have been cancelled for the time being, using the same online video conference programme, teachers are heading into greater reliance on telehealth clinics. Most staff providers have to date, held these meetings alone. As it has become apparent that this format will be necessary for some time, teachers are redirecting our energies to keep clinic residents active and retain this educational environment for them. Our clinical model is still changing, but currently entails trainees making direct contact with patients sent to us for initial appointment sessions, collecting a detailed profile, and then formulating a strategy as they usually would (Maji, 2020).

While teachers are msearching at opportunities for residents to use simulation equipment outside the hospital, unless they are on call and actively engaged in patient treatment, teachers have prevented residents from coming to the hospital; thus, their access to simulation is still limited. In the absence of operative events, these practises can be very useful for residents with access to a non-hospital-based simulation facility to retain professional expertise by deliberate practise (Verhagen, 2020).

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### **Conclusion:**

The client and trainee then hold a multi-user video call with the patient so that the resident can engage in the patient's final counselling and the final strategy formulation. Finally, once the patient has signed off to finalise the experience, the client and trainee have a chat. There are certainly possible issues with this approach, such as patients with restricted internet connectivity and technical resources, relationships with patients without in-person visits, lack of physical inspection, and information security ambiguity. While these constraints are very

real and teachers are constantly trying to enhance this procedure, teachers agree that this is an important and word-for-word process.

Although simulated academic conferences and telehealth may be used as a temporary substitute for learning during didactic and clinical period, the substantial reduction in the amount of time in the operating room will not be accounted for. Some systems will be able to supplement resident learning with simulation in different ways, depending on the context. Although simulation does not necessarily require gathering in large crowds, simulation equipment, as it is with our software, is mostly situated inside the hospital.

### **Recommendations:**

The technology applies to an operation procedure such that the research recants after a suggestion from students from Islamabad.

- 1) Greater trainers for ICT trainers and educators should be developed.
- 2) ICTs or regulations should be applied especially in the knowledge of social media students and human spiritual growth.
- 3) Technical knowledge both inside and beyond the home, school and culture should be improved.
- 4) Technology education can help to adapt elements of standard components
- 5) Education in technology can build an awareness of curiosity.

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