

## TECHNOLOGY IN TEACHING, RESEARCH, EVALUATION AND GOVERNANCE

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### **Abstract**

*With the use and fusion of technology in schools, the primary aim is to evolve how teachers and students cluster; approach, interpret, present and forward/transmit information. Virtual classrooms, video, robotics, and other technology tools can not only make classes more lively but they also create more effective learning environments where natural teamwork and curiosity capacitate teachers to collect data on student achievements.*

*Technique/Technology plays an intrinsic role in information technology education and experimentation. In this present era accepting technology is the potential for mishandling and increasing the rate of the fact-finding processes. Technology authorizes the researchers to be much more focused in what they measure or considered and how rapid response can be received.*

*Educational technology evaluates its impacts in the Classroom use to evaluate a process or module is to determine its importance and usefulness. Technology has transformed learning processes in school or college classrooms, with the help of teachers observant to approximate the new learning techniques with the help of technologies.*

*The information and communications technology (ICT) has increased many hopes in the educational institutes as well within public sector managements. It is accepted as a effective tool for change and growth and is believed to have power for increasing government accountability, transparency in sysytem, Public Expenditure Management (PEM), etc. New technologies influence great assure for improving government effectiveness with a composite concept that includes, control on corruption and efficient delivery of public goods such as education for all, health sectors, social securities, and transport methods. The Work remotely is the new mainstream and in this synopsis, information empowerment becomes fundamental to a successful*

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democracy. The approach of Information and Communication Technology (ICT) has promote the very fastly of a global **Information Society** that is changing the way of human beings life, learning, working and communication.

*It is very important to note that technology is a tool of techniques used in educational growth in the societies and not an end in itself because it have a vast future technology.*

**Keywords**

*ICT, technology, governance, impact, evaluation, research etc.*

**Introduction**

Today there are Many high-demand jobs were created in the past decades, according to the International Society for Technology in Education (ISTE). As per new advents in the technology drive globalization and digital transformation, teachers can help students to acquire the necessary and effective skills to make succeed in the careers and job of the future according to the invention in the technologies .

How important is technology in education? When COVID-19 pandemic was quickly demonstrating then online education should played a vital part of teaching and learning processess. By integrated technology into existing syllabus of subjects, as opposed to using it solely as a crisis -management tool, teachers can exploit the online learning methods as a effective educational tool.

The impact of use of digital learning tools in the classrooms can upgrade the student sessions , which help teachers to improve their lesson plans, and provides personalized learning. It also helps students to build essential 21st-century skills.

It is very important to note that technology is a tool of techniques used in educational growth in the societies and not an end in itself because it have a vast future technology. The promise of educational technology lies in what educators do with it and how it is used to best support their students' needs.

Information Technology provides to students with easy-to-access information, fastly learning processess, and gratification opportunities to practice what they learn. It enables to students for explore new subjects,lessons plans etc. and escalate their understandings of difficult type of concepts.

**Research Objectives**

These are the major objectives of this research:

1. Use of technology in teaching and learning, the role of technology in teaching.
2. How does technology help teachers in teaching, and what technology is used in teaching and the benefits of technology in education.
3. How does technology help research and changed our research techniques?
4. How can technology improve data and information collection?

5. How do you evaluate technology in education and why it is important in education?
6. What is evolution of technology in education and why evaluation important, tools and process to evaluate technology?
7. What are the types of evaluation in education and what is the main purpose of educational technology?
8. How does technology help in governance and What technologies are used in government and use of technology in governance.
1. **Use of technology in teaching and learning, the role of technology in teaching.**

Technology lead the way in basic structural changes that can be essential to attaining outstanding developments in performance. Acclimated and use to support both teaching skills and learning processess, technology inspires the classrooms with digital learning skills with the help of tools, such as computers and any portable devices that can be carried and held in one palm; enlarge course offerings, experiences, and learning matters and skills which supports learning 24 hours a day alongwith 7 days a week for builds 21<sup>st</sup> century skills as well as increases the student assosiations and determinations and improves learning processess and skills. Technology also has the power to transform teaching processes by lead the way in a latest model of related teaching. The latest related model links the teachers with their students and with professional contents as well as teaching resources, and systems makes help them to improve their own instruction and personalize learning.

Online opportunities of learning and the use of resources for openly academic processes and the different technologies can increase instructional productiveness by using accelerate the rate of learning and reducing fee related with educational substances or application delivery; and higher utilizing trainer time.

With the incorporation of technology into schools, the predominant purpose is to exchange how teachers and students gather, access, analyse, current and transmit information. This can democratize data in lecture rooms as properly as assist differentiate instruction, specially for college students with distinct needs.

2. **How does technology help teachers in teaching, and what technology is used in teaching and the benefits of technology in education.**

Technology obilize a different kinds of Learning techniques or methods. Whether participants or students of the colleges and schools analyze great through lectures on screens, reading examples, or video conferences. Technology knows

that how to approves teachers to accommodate each and every gaining knowledge of style. Upon that Students can study through online videos, audio-books, interactive on online games, and more, all at their own steps.

Virtual classrooms, video confrences, augmented reality (AR), robotics, and different kind of technology equipments can now not solely make type more lively, they can additionally create extra inclusive learning environments that cherish participation and curiosity and authorize teachers to collect the data on student's performance.

Teachers want to upgrade the performance of students and technology plays very important role to complete this aim. To diminish the challenges, administrators need to help of teachers to acquire the capabilities wished to enhance learning for the college or school students through upgraded technologies. Over and above that, technology in the schools and colleges need to make teacher's jobs easier except including extra time to their all day.

Technology contributes to students with easy-to-access information, as ell as rapidly learning, and enjoyabale opportunities to practice what they all learning. It also allows students to discover new subjects and magnify their grasp of tough concepts, sapecially in STEM. Through the use of technology inside and outside the classroom, students can achieve the better 21st-century technical abilities which will necessary for future vocation.

Now today, students learn more effectively with direction. The World Economic Forum reports that while technology can help new generation to learn and get knowledge through play, for example, evidence suggests that learning is more effective through guidance from an adult, such as a teacher.

Leaders and administrators need to take stock of where their faculty of school are in terms of their grasp of online spaces. From lessons realized at some points of this disruptive time, they can put into effect options now for the future. For example, administrators ought to provide teachers a week or two to think carefully about how to train courses now not beforehand online. In addition to an exploration of solutions, flexibility at some stage in these attempting times is of paramount importance.

### **3. How does technology help research and changed our research techniques?**

Technology performs an reuisite role in information literacy and research. The introduction and large scale use of information in electronic formats through article databases and the Internet has had a outstanding affect on the way students and instructors discover and make use of lookup material.

Adding technology to the mix decreased the achievable for human error and improved the speed of the research process. Several many years later, cloud-based software programs commenced altering the way researchers collect data, as well.

Technology buildup what market research can already do. Technology has made it viable to speedup typical market research processes, making them more environment friendly and streamlining charges through revolutionary methods that can be used as both an alternative choice or complement to common methods.

#### **4. How can technology improve data and information collection?**

Data collection upgrades beyond the ordinary techniques such as paper surveys, interviews, and focus groups, technology permits to researchers to be much more targeted in what they measure and how shortly remarks can be received.

#### **5. How do you evaluate technology in education and why it is important in education?**

Analyzing the use of technology in education in class is vital as evaluating the methods carried out in any project. Educational technology used to evaluating its effectiveness in Classroom or lecture rooms and also to consider a system or object is to determine its significance and usefulness.

1. Steps to analyse the value of technology in educational field. Reference books. ...
2. Setting Aims. ...
3. Prepare to distinct records from before and after the use of technology. ...
4. Gather and evaluate the Data. ...
5. Using principles, give a rating for every goals you set. ...
6. More help on evaluating educational technology.

Technology can assist to teachers track and examine their students' — as properly as their own — representation in the classroom. It can additionally be used to facilitate communication between students and teachers and to create digital files of student growth and development that can without problems be exceeded along from grade to grade.

#### **6. What is evolution of technology in education and why evaluation important, tools and process to evaluate technology?**

The evolution of science and technology in the educational zone dates again 2,500 years ago. Technology has changed learning processess in classrooms, with teachers perspective to reproduce new learning methods with the assist of technology. Orally conversation (mouth-to-mouth) in historical times, phrase of mouth was solely shape of communication.

Technology appraisal is an try to setup an early warning system to detect and control and direct technological adjustments and developments so as to maximize the public properly while minimizing the public risks.

Evaluation tools is an instrument to switch and enforce educational objectives into a exercise which have interaction contributors in the learning process. An educational tool must self sustain. (This means that it must shape, a might be short, however complete learning process.)

Here are six matters to maintain in idea when analysing new technology:

1. Identify your problem. It sounds simple, however many organizations leap straight to the options they discover appealing. ...
2. Keep an open mind. ...
3. Get your people on the same page. ...
4. Consider internally change management. ...
5. Focus on the future. ...
6. Pay attention and wait.
7. **What are the types of evaluation in education and what is the main purpose of educational technology?**

In particularly there are three kinds of evaluation used in the classroom. These are summative evaluation, formative evaluation and diagnostic evaluation. Summative Evaluation is the usually recognised type of evaluation. It comes at the end of the term, cascade or programme of teaching.

The fundamental objective of technology in education is to enhance the excellent of schooling and improve the learning process. Most importantly, technology should expand the teaching and learning process as nicely as facilitate higher overall performance of educational systems as it intensity upon usefulness and capability.

8. **How does technology help in governance and what technologies are used in government and use of technology in governance.**

Technology governance can be described as the techniqe of utilizing politically, economically and administratively authority in the growth, dispersal and performance of technology in the societies.

At presentely, new technologies maintain top notch promise for for enhanced authorities effectiveness, a heterogeneous notion that includes, among other things, manage of corruption and efficient transport of public things such as education for all, health in socities, social securities, and transport facilities.

Information and Communications Technology (ICT) has increased many excitement about and inside public area management. It is acknowledged as a

powerful tool for trade and is believed to have achievable for growing government liability, visibility, Public disbursement Management (PDM), etc.

Government and public sectors are recognizing the technology to ensure visibility. Meet to citizens increasing hope for a digital services. Offer higher aerodynamic quality services.

These type of technologies presently being used in government

- Artificial intelligence (AI), machine learning languages and algorithms.
- Block-chain, crypto-currencies and distributed ledgers.
- Drones, mechanical robots, wearables and the internet.
- Data-visualization, simulation and huge data.

Government has taken a good deal of the **e-governance initiatives** for necessary public service delivery. Also, when combined with emerging technologies, it can assist in accomplishing **sustainable improvements/developments goals**.

Sustainable Development Goals	Suggested Application of Emerging Technologies
SDG 6 Ensure availability and sustainable management of water and sanitation for all	Using smart meters, soil sensors, remote irrigation management system, rainwater harvesting systems etc.
SDG 7 Ensure sustainable energy for all	Using smart grids, smart appliances, energy storage, predictive analysis, demand response technology.
SDG 11 Make cities and human settlements inclusive, safe, resilient and sustainable	Smart City Mobility- driverless mobility, interconnected infrastructure using IoT: Smart Building- Alarm management and automation, big data analytics and energy management, monitoring, detection and diagnosis technologies.
SDG 12 ensure sustainable production and consumption patterns	Smart Village- optimised farm management and automated irrigation system, soil sensors and satellite and integrated real time weather information, traceability and tracking system.
SDG 13 Combat climate change and its impacts	All digital solutions including smart villages, smart buildings, smart energy, smart manufacturing, smart mobility
SDG 14 Conserve and sustainably use the oceans, seas and marine resources for sustainable development	Smart ways of conservation through advanced mapping and data technologies, sub-marine, coastal and inland mar sensors, real time satellite imaging

## Conclusion

This interference precipitated via the pandemic has furnished an possibility for the public utilities to dominance technological capability and enhance to fillup the fundamental duty. This will require the placing up of principles for making sure participation, security and robust technology.

Teachers can dominance for technology to achieve new goals of economically growth, implement beneficial digital equipment to enlarge the learning scopes for students, and enlarge student support and engagement. It also enables teachers to improve their practice techniques and customize learning. Schools can get advantages from science and technology with the aid of decreasing the fees of physically teacher learning materials, upgrading educational program efficiency, and making the high quality use of teacher time.

In order to find out the improvements and new prototypes in the administration of justice, there is a demand to center of attention on **6<sup>th</sup> generations of Information Technology i.e. Computer density, Communication skills, Connectivity of networks, Cyber laws , Cost and Common sense** to proceed as an effective and well-governed nation in the twenty-first century.

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