## International Journal of Advanced Trends in Computer Science and Engineering Available Online at http://www.warse.org/IJATCSE/static/pdf/file/ijatcse1231032021.pdf

https://doi.org/10.30534/ijatcse/2021/1241032021



### The Impact of Information and Communication Technology and Social Mediain HEIs: A Review

Nimra Afzal<sup>1</sup>, Zaira Hassan<sup>2</sup>, Hina Bhanbhro<sup>3</sup>, Momina Ali<sup>4</sup>, Kinza Bisharat Ali<sup>5</sup>, Neelam Baloch<sup>6</sup>

<sup>1</sup>Department of English, SBBU-SBA, niminimra941@gmail.com
<sup>2</sup>Departmen of IT, SBBU-SBA, zairahassan@sbbusba.edu.pk
<sup>2</sup>Departmen of IT, SBBU-SBA, hina@sbbusba.edu.pk
<sup>3</sup>Department of English, SBBU-SBA, 20bseng072@sbbusba.edu.pk
<sup>4</sup>Department of English, SBBU-SBA, 20bseng138@student.sbbusba.edu.pk
<sup>5</sup>Department of English, SBBU-SBA, muntahajamali@gmail.com

#### ABSTARCT

With the advancement in the 21st century, information and communication technology (ICT) and social media have touched many horizons and presently influence almost every aspect of life. They are playing a key role, especially in the Education sector of Pakistan. ICT has an indispensable role in the exchange of information, teaching methodologies, and learning perspectives, with a greater emphasis on research and academic development. The use of social media by students in the educational environment has allowed easy access to digital content, which helps students a lot in educational fields. This study aims to present the impact and influence of ICT and social media in the quality improvement of education and academic research development. How ICT used in classrooms to create opportunities for students in enhancing their skills, helps teachers in effective teaching, and know the positive effects of social media?In this regard, the study intends to pay particular attention to how ICTs play a pivotal role in the education sector, especially in Pakistan.

**Key words:** New technology, Academic Education, Social Media, Organization.

#### 1. INTRODUCTION

"We require innovation in each classroom and in each understudy and teacher's hand, since it is the pen and paper of our time, and is the lens through which we can understand much of our world"—David Warlick

"The innovation itself isn't transformative. It's the school, the instructional method, which is transformative"-Tanya Byron

ICTs (Information and Communication Technologies) are broadly characterised as all communication technologies, including the internet, wireless networks, computers, and social networking, that emphasised unified and blended forms of

communication. Information and technology features play an imperative role in fast changes in society through the new worldwide economy. Previously ICT has adjusted and advanced so that no developing country is eligible to gain up with the uprising and are left beyond and thus weak in communication from advanced countries. Now a day's every single person is taking benefit from technology, not only the candidates. They belong to this field and apart from them if we cite in an illustrative way so examine that in Covid19 With the help of Technology companies, organisations, even Schooling system are Having their communication politely without any disruption through media. In modern technology, ICTs have an important role in improvement. The web, TV, mobile, and radio etc., fall into ICTs. This will play a crucial function in several fields like health and education. ICT acts due to the communications of the present-day world; thus, expertise in this generation and its essential concepts is considered a component middle of education. Technology canmodernise instruction methods, where and how mastering occurs and, consequently, the roles of scholars and educators inside the coaching and mastering procedure. ICT is changing processes of the tutorial procedure via way of means of contributing works of energy to mastering conditions concerning e-mastering. It's a good and influential tool for offering academic opportunities; thus, it is difficult to visualise destiny mastering conditions that do not appear to be strengthening via facts and verbal exchange generation. Educational establishments may make use of ICT to reinforce the scholars with essential talents and understanding for the twentyfirst century, such it can boost worldwide availability to education, academic equality, broadcasting of quality coaching mastering programs, educators' expert increase and to assist in acquiring an extra practical academic administration. Apprentice usesa computer to be trained the tasks, skills, or process at that time the teacher teaches through the computer

online. And in fact, now the students can learn from online videos, discussion groups and so on. Students can also Question their teachers through the class group on WhatsApp or email. Nowadays in the classroom, teachers are using the projector and visualising graphs and charts for better understanding, which positively impacts students' learning.

# 2. IMPACT OF INFORMATION AND COMMUNICATION TECHNOLOGY AND SOCIAL MEDIA

#### 2.1 Educational improvement in Pakistan

Nelson Mandela's words, education can be used as a powerful weapon to transform the world in economic and sociological aspects. Technology can be called the latest weapon of this era. Modern techniques of ICTs contains approaches for data generation, data processing, and then renovating data for further processing and then transfer it for research work

These days, Pakistan is in intense need of transforming the educational system by implementing and incorporating ICTs in classrooms and learning procedures. In this way, Pakistan can touch the heights of excellence both academically and professionally.

In Pakistan, ICT can also be utilised to intensify educational curricula. This has profound effects on education in Pakistan. There are some of the institutions which give information & knowledge through social media such as Allama Iqbal open university so this university is taking advantage through the new technology and social media for the academic purpose, they give you full guidelines via technology. Education in Pakistan means for enabling progress as in many countries. ICT refine the quality of education and training by enhancing learner inspiration, expanding teacher training and promoting the acquisition of fundamental abilities.

Moreover, it brings a valuable change in education by adding effectiveness in the teaching and learning process. With the introduction of new applications, communication has become more convenient. It makes the educational environment more active, creative, evaluative and informative as compared to traditional methods of learning. The resultant output of this is skilful and socially helpful peoples. ICTs are a possibly strong tool in formal and non-formal extending instructive opportunities. collaboration and the joint venture of technology and education promote the level of analytical and critical depth of information known to students. That is one of the many tremendous effects of ICT in the educational domain. Furthermore, its effects on getting to know of students, the performance, and of course, to the students' success. The whole span of ICT's impact on the achievement of students has not any measuring equipment. However, and still, ICT has a role in the achievements of students.

### 2.2 Research and Academic Development in Pakistan

According to Blurton, ICT can be characterisedas a "multiple set of innovative devices and assets utilised to multiplicity, and to form spread, store, and oversee information." (ICT) information communication technology is playing multidimensional position in the conventional educational system of Pakistan. ICT wants near association of all the regions of social life: the government, agency, public and confidential educational institutions, non-profit organisations, secular and religious communities for its propagation. Through the assistance of the internet and the globe Wide Web, a tremendous number of individuals presently be gotten to at any time can learn anything in nearly every subject. In the present development, ICTs properly could play an important role as tools for the general reformation of learning-instructional processes, academic intimacy in facilitating student's development in collaborating skills and working productively with knowledge (Harley, 2000).

The aptitude of ICT to vary the manner paper do things is either concealed in the internal process – like however, a business office manages information assortment – or apparent within the final result – like digital support for health care services in an exceedingly distant province and ICT refine the quality of education and training by enhancing learner inspiration, expanding teacher training and promoting the acquisition of fundamental abilities. In contrast, the amount and temperament of the advantages of ICTsmay possibly take issue for each neutral, there's an accord of what ICT will facilitate give to the government, business, and general public: quicker entrance to relevant info, An economical suggests that for communication, An increased capability to create sophisticated selections, along with a tone of voice to otherwise inaudible peoples. The mixture of the online knowledge community and flipped education, not as it was upheld societal and interpersonal communication moreovercooperation but too improved the participants' verbal ability. The societal networking site focuses heavily on online construction communities with general interests or behaviours. ICT in education tells the incorporation of computers in the teaching-learning process. By the use of ICT, one can instruct recommendations from specialists or fellows. Within academic circles and for academic purposes, students utiliseICT for their learning. In this process, analyseacquaintance and have privacy with different partners for academic purposes.

#### 2.3 E-learning in Pakistan

For the first time, online teaching started in the early 1980s, based on the contraption of computer conferencing Murray Turoff in 1970. One of the first institutions to accessible teaching through computer conferencing was the Jersey Institute of Technology

in the USA. Nowadays, because of advanced and modern technologies, people are interestedin online learning. The tools used in online learning are; Google classrooms, zoom, YouTube, Google meet, or technology that can be accessed via an internet connection.

With the rapid growth of technology and the internet, people are taking advantage of that, and online learning is one of the great compensation from them, Now the students are not restricted to take information just from the institutions/academies, but now also they are free to learn from the distance through the online learning tools.

In fact, now instructors are not only from a distance, but in class, they are using the online learning tools via the internet, they hydrides and applying both techniques together in the class. Such as they give students online Activities to be performed in class. In offline learning, we are restricted to learning specific things and subjects, but there are no boundaries in online learning. You can learn whatever you want through online learning tools. There are some universities worldwide that teach properly with online learning tools. They arrange the online classes, activities and whatnot. Online learning is so much benefit that you can take your online class whenever you want its available 24/7, and you can learn from any tutor across the world, which will enhance your communicating skills through the latest technology.

#### 2.4 Scope of Online Learning Tools in Pakistan

As we have cited that in worldwide online learning is already playing an important role. People out there are taking online education not only gives you a vast number of ideas but also it saves your time, but when we talk about Pakistan before 2019, not many people know about online learning neither online learning tools, but some of the people were using this learning process before, but it does not have the reputation which it has should be because not everyone knows about this before. But since Covid-19 has reached Pakistan, so the total perception of online learning has changed. In institutions, academies, and offices or in the organisation, an online learning tool has become a rescuer. Students have adopted online learning, and it is much easier and flexible with online learning tools. Different people are using different tools (channels). There are so many websites providing online lectures and arranging webinars that give appreciation certificates. There is another online tool named screen recording, so if you miss the online session the tool record that specific lecture and upload on any medium which is flexible for the learners,

#### 2.5 Effective Online Learning Tools in Pakistan

However, if we converse in general, still not everyone can afford the cost of any institution so, the online learning process cost less than taking admission in any institution. In Pakistan, there is an educational website known as *campus.pk*, which offer

free online courses for so many subjects such as; chemistry, physics, biology and so on. The students are welcome to take advantage of this website because they have many professionals for their subjects who teach them, and there is no issue with the timing you can learn which suits you. Apart from this website, there is an online university in Pakistan named Allama Iqbal open universities that provide you the online lectures. There is a channel of their university on YouTube, which provides you so many lectures associated with your course.

#### 2.6 Advancement in E-learning

While the internet and modern technology have made numerous tasks easier, it has also made teaching and learning process much easier. The ongoing scenario of Covid-19 transformed the traditional methods of learning into remote or distance learning, which has further increased the importance of e-learning. Elearning, in a broader context, encompasses learning methods and processes via electronic means. From a limited perspective, it can be defined as learning that is permitted electronically by using digital technology or, in a restricted sense, online learning using the internet. The advancement and development in technology and the use of the internet as the latest teaching method haverevolutionisedthe educational system. Higher educational institutions are competing to advance various online courses for students to master different skills. Thus, E-learning has increased its importance day by day.

#### 2.7 Effectiveness of E-learning

The adoption of E-learning in schooling, specifically for better academic establishments, has numerous advantages. Given its numerous blessings and advantages, it is considered some of the exceptional strategies of learning. Several research and authors have supplied advantages and blessings derived from integrating virtual learning technology into schools. For instance, Marc (2000), in his e-book evaluated estudying techniques for turning in know-how in virtual age referred to that one of the blessings of remote learning in educational institutes is its cognisance of the wishes of character novices as a crucial component withinside the manner of learning in preference to at the teachers', or academic establishments' wishes. Some of the blessings that the adoption of e-learning in schooling, acquired from evaluation of literature consists of the following:

- 1. It is bendy whilst troubles of time and vicinity are taken into attention. Every scholar has the posh of selecting the vicinity and time that fits them. According to Smedley, the adoption of e-studying affords the establishments and their college students or novices a lot flexibility of time and vicinity of shipping or receipt of consistent with studying information.
- 2. E-studying complements the efficacy of know-how and qualifications through ease

- of gettingthe right of entry to a large quantity of information.
- 3. It is capable of offer possibilities for family members among novices with the aid of using the use of dialogue forums. Through this, e-studying do away with obstacles that can hinder participation, inclusive of the concern of speaking me to different novices. E-studying motivates college students to engage with different, in addition to trade and admire distinct factor of E-learning communique and additionally eases improves the relationships that preserve studying. Wagner notices that e-Learning makes to be had more potentialities for interactivity among college students and instructors at some point of content material shipping.
- 4. E-studying is fee powerful withinside the feel that there may be no want for the scholars or novices to travel. It is likewise fee powerful withinside the feel that it gives possibilities for studying for an optimum wide variety of novices without want for plenty buildings.
- E-studying usually takes into attention the character novices differences. Some novices, as an instance, opt to deal with positive components of the course, whilst others are organised to study the complete course.

E-studying facilitates catch up on scarcities of instructional staff, inclusive of teachers or instructors in addition to facilitation.

### 3. ENGLISH LANGUAGE COMPLEXITIES DURING ONLINE LEARNING

Online learning is a trend today, and it has many advantages, but on the other hand, it also has disadvantages that are complexities faced by instructors and learners. Completely online language courses might have in learners never assembly with each other in a face to face setting.

#### 3.1 Complexities Faced by Learners

Online learning is not suitable for all because learners have dominant learning techniques like few visual, few auditory etc. Online classes do not provide rules and guidelines to obey their teacher and a lot of selfdiscipline; that's why students have the freedom to do what they want. In online classes, a learner sits in front of a mobile or laptop that is not suitable for all learners. Students may feel laziness and involve in the other activities of a device such as using social media, playing games, chatting, sharing images, etc. These activities take away students from meaningful purpose and waste one's time. It's not affordable for all E-learning students to buy smartphones and internet packages, also increasing day by day. Such things affect E-learning education in a way that they can't attend the class and lose many important things. Students also face attendance issues. Furthermore, E-

learning students face technical issues. The majority of students does not know the correct use of technology and they can't have a high connection that fulfils the requirement of online classes—spending a lot of time in online classes leaving a massive effect on the health of students and teachers such as eyestrain, headache, neck pain and other physical issues. Human being learns a lot of things from their surroundings or physical activities like discussion, body language, giving new ideas but unfortunately, online classes take away students from these physical activities.

#### 3.2 Complexities Faced by Instructors

Most academic leaders thought that retaining students is more difficult for online courses than for face-toface. A few teachers and guardians worry that these patterns in expanded online learning will corrupt instructive quality, spoken to for numerous by the gold standard of conventional face-to-face instruction. By the same token, online courses moreover very fiercely not as it were in terms of their organisations but moreover in terms of their utiliseof specific innovative instruments sand pedagogies. In these courses, instructors confront the issue of the need for strengthening. In such circumstances, the part of teaches in making, forming, and coordinating their own experiences into the substance of the courses has been made light that instructors may not be willing to alter their instructing procedures when transitioning from a face-to-face to an internet course. These obstacles can be described into four major ranges of challenges: cognition, metacognition, specialiseduneasiness, and learning styles and preferences. Need of fitting materials and assets, Specialisedissues, Need of in benefit preparing, trouble in gathering all the understudies for the course, Need of participation from the guardians, Need of web offices to the understudies, trouble to take after up the learning of understudies are the major challenges confronted by them. Advance instructors have an exceedingly positive and positive demeanour towards online instructing but due to needing for viability and preparing in the online mode of instructing, they feel that they can educate superior in conventional educating.

### 4. POSITIVE IMPACTS OF SOCIAL MEDIA ON EDUCATION IN PAKISTAN

Social media is a platform or technique to unite people who give freedom of speech to individuals to express their ideas openly. Social media not solely helps to amass information however, conjointly establishcontinuing relationships with individuals, linking with fellows living quarters residents throughout Facebook, Twitter, along with numerous societal sites will facilitate a scholarbeat the sort of isolation that otherwise may lead herto depart faculty. A Twitter account will keep scholars with data regarding actions that facilitate personal encounters with alternative scholars.

privaterelations are important to making and nourishing a way of happiness. The use of technology accommodatesscholar" totally diverse learning designs isn't stories. The power of social media applications is that they provide Associate in nursing assortment of tools that learners will combine and match to best suit their individual learning designs and increase their educational success. The networking of social media does focus on making online relations within the ordinary interest and manners. Just because of social networking sites, scholars are more facilitated in developing leadership strategies, from lower level designing and organising the activities to promote public amendments and selfruled engagements. In a nutshell a social networking site gives scholars the opportunity to engage with each other and also precise and share their creativities. Such sort of healthy personal activities are very much important and give the individual sustaining way of happiness.

#### 5. CONCLUSION

To sum up, information and communication technology is a very significant field, especially in the enhancement of Education in Pakistan. Pakistan should step forward to embrace new technological changes so that advancements in fields of scientific research and academic development can make easily. Whether this work speaks about the business organisation or for Educational purposes, ICT became a priority for the quality. It gives you so many facilities and allows you to learn new technology and use them in your daily life routine. The study says that information & technology has worked very well for the academic purpose. This technology facilitated the scholars in such an optimistic way that they can actually get the recorded lectures from social media and go through them whenever they get time.

#### REFERENCES

- Januizewski, A., &Molenda, M. (Eds.). (2008). Educational technology: A definition with commentary. New York: Lawrence Erlbaum Associates. Krathwohl, D.R. (1993).
- Methods of educational & social science research (2nd ed.). New York: Longman. Martin, Campbell-Kelly, William &Aspray, (2004).
- 3. Computer: A history of the Information machine. United States: Westview Press
- Adelsberger, H., Collis, B., &Pawlowski, J. (2002). Handbook on information technologies for education and training. Retrieved July 14, 2011 from

- http://www.springerlink.com/content/9783-540-74155-8
- Al-Alwani, AbdulkareemEidSalamah (2002). Integration of information technology in science education at Yanbu, Kingdom of Saudi Arabia. Retrieved July 23, 2011 from www.intechopen.com/download/pdf/pdfs\_id /94 19
- Albirini, A. (2006). Teachers' attitudes toward information and communication technologies: The case of Syrian EFL teachers. Computers & Education, 47(2), 373-398. Retrieved June 19, 2011, from http://www.ccsenet.org/journal/index.php/ie s/art icle/view/5891/4664
- Rosen, L. D. and Weil, M. M. (1995). Computer Availability, Computer Experience and Technophobia among Public School Teachers'. Computers in Human Behavior, 11(1). Retrieved July 22, 2011 from http://www.sciencedirect.com/science/journ al/07 475632
- Stack, Eamon. (2008). ICT in Schools: Inspectorate Evaluation Studies. Dublin: Brunswick Press. pp. 177-194 Retrieved June 22, 2011 from School Development Planning Initiative (SDPI) Web site: http://www.sdpi.ie/inspectorate/ICT\_in\_sch ools \_insp\_report.pdf
- 9. Tinio, L. Victoria. (2003). ICT in Education. New York: UNDP-APDIP. Retrieved July 13, 2011 from http://www.apdip.net/publications/iespprime rs/e primer-edu.pdf
- Mumtaz, S. (2000). Factors affecting teachers' use of Information and Communications Technology: a review of the literature. Journal of Information Technology for Teacher Education, 9 (3), pp.319-341. Retrieved July 23, 2011 from http://www.mendeley.com/research
- Obe, Joseph (2008). Introduction to Mass Communication, National Open University of Nigeria, ISBN: 978-058-725-X. Retrieved July 23, 2011 from www.nou.edu.ng/noun/NOUN\_OCL/pdf/pd f2/ MAC% 20111.pdf
- 12. Patrikas, E. O. & Newton, R.A. (1999). Computer literacy among entering allied health students and faculty: A process for rational technology planning. T.H.E. Journal, 27(5), 60-65. Retrieved July 23, http://citeseerx.ist.psu.edu
- 13. British Educational Communications and Technology Agency (BECTA). A review of the research literature on barriers to the uptake of ICT by teachers. Retrieved

- July 23, 2012 from http://www.becta.org/postnuke/index.php
- 14. Cavas, B., et al. (2009). A study on science teachers' attitudes toward information and communication technologies in education. The Turkish Online Journal of Educational Technology vol. 8, no. 2, pp. 20-32. Retrieved July 23, 2011 from http://www.eric.ed.gov/ERICWebPortal/con tent delivery/servlet/ERICServlet?accno=ED505 935
- Dawes, L. (2001). What stops teachers using new technologies? In M.Leask (Ed.), Issues in Teaching using ICT. Retrieved June 15, 2010, from http://www.informaworld.com/index/751265358.p df
- Leidner, D. E., & Jarvenpaa, S. L. (1995). The use of information technology to enhance management school education: A theoretical view. MIS quarterly, 265-291.
- Kozma, R. B., &Voogt, J. (Eds.). (2003).
   Technology, innovation, and educational change: a global perspective: a report of the Second Information Technology in Education Study, Module 2. ISTE (InterntlSoc Tech Educ. Garson, G. D. (2000).
- 18. The role of information technology in quality education. Social dimensions of information technology, 17797.