
Techno-Educo Integration in Current Scenario

Rama Shanker Yadav¹ & Pratibha Yadav²

¹Faculty of Science, Govt. High School, Sunaury (Khaira), Lalitpur (UP)-INDIA

²Faculty of Education, Juhari Devi Girls PG College, Kanpur (UP)-INDIA

¹Email: ramaphysics09@gmail.com

doi: <https://doi.org/10.37745/bjmas.2022.04217>

Published January 19, 2025

Citation: Yadav R.S. and Yadav P. (2025) Techno-Educo Integration in Current Scenario, *British Journal of Multidisciplinary and Advanced Studies*, 6(1),13-25

Abstract: *Current time of globalization demands technology education integration for development of humanity by offering education at every door step in inclusive and efficient manner using different alternatives. The present article “Techno-Educo integration in current scenario” explores role of technological development to be used in education for better learning outcomes especially after covid-19 where digital technology has been proved to recover gap between learners and teachers in very smart, intelligent, efficient and attractive way offering multiple dimensions in teaching and learning. Technology has revolutionized teaching methods making teaching easy, smart, fun loving, fearless, repeatable, child centered, cost effective and promised for quality education. Digital classroom is offering better leaning outcome, engagement, collaboration, flexible education and utilization of latest digital resources without any gender biasing depicting barrier less education to all at global level. Educational apps represent technological involvement in education in terms of software making it easier and more affordable to all. Govt. of INDIA has also developed multiple apps and portals for promoting inclusive and quality education to all with help of information and communication technology (ICT). Media has also enlarged its space using technology and offered multiple places like blogs, digital story and multiple social media platforms for leaning, management, sharing of ideas, views, creativity and other digital information without any constraints. Various application of Techno-Educo integration is also discussed like convenient and innovative teaching learning, blended teaching, distance and e-leaning, teaching for CWSN, flexible and inclusive leaning style and many others exploring its importance according to current demands. The dark side of technology is also enlightened keeping in mind importance for safe and secure utilization of technology.*

Keywords: Digital Technology, Education, Educational Apps, Digital classroom

INTRODUCTION

Education is the only one which works for establishment and development of humanity at global level by acquiring knowledge, skills, values, belief, habits and many more offering everyone to

develop and grow their life for betterment of society, Nation and even at global level also. Education helps to stimulate critical thinking, problem solving, decision making and communication skills for personal and professional development leading to full fill life requirements, contribution to society and making decision for individual as well as community. Education is a growth and end of education is more education for Holistic development of individual, society and Nation [1]. Technology is use of scientific knowledge for practical applications in industry or in our daily life for ease of our life, smartness and entertainment offering innovative ways of doing work in smart manner by increasing efficiency of production in more comfortable way. The engagement of Technology with education has opened new smart ways of achievements in more efficient and easy manner with reduction in cost. Integration of Information Technology in education has reformed education via Mobiles, smart phones, tablets, laptops, audio-visual aids, smart digital boards, virtual labs in schools and institutions. Information and Communication Technology (ICT) and education has improved its relevance and quality of knowledge at both teacher and student level via active learning, promoting better learning engagement, collaborative and cooperative learning, creative learning, integrative learning by eliminating gap between theory and practice and evaluating learning i.e. the way of teaching and learning process. Education technology has enhanced teaching-learning activities by offering globalization without any geographical limitations. The use of wireless technology devices in school as intelligent learning tools, online classes, assignments, evaluations, invited lectures, examinations and results also help students in great context [2]. During Covid-19 pandemic lockdown and quarantine time, digital technologies keep education system active by engaging students maintaining their interest without distractions. Student learning can be more dynamic, engaging, fascinating and entertaining for student via incorporation of the digital technological resources in classroom. Internationalization of Education has also forced schools and institutes to adopt technology in education for conducting classes, sharing knowledge, assessments and day by day activity of schools. Covid-19 pandemic has become nourishing to educational technology in school. Digital education resources and advanced tools were developed to improve digital classroom environment and making teaching-learning more effective as well as offering more flexibility and customization of curriculum based on requirements and better engagement of students via utilization of projectors, Smart TVs, computers in classroom for facilitating and entertaining students keeping child at center of learning process in which the learner efficiency is modified by downloading and uploading the required digital contents, opting Gamification or flipped classroom approaches for optimizing learning, making it more inspiring and meaningful education according to current scenario [3-7].

Technology in Teaching Methods

Technology is working as a mediator between students and teachers for quality education to all as prime objective and has strengthened current educational system by updating teaching methods with variety of tools and processes. Story telling method is being digitalized with computer based tools for telling story or presenting any idea or concept in more effective and powerful way to

engage students, motivation and learning outcome by involving digital text, images, audios, videos, maps, 3D projects and social media elements. Digital story telling in classroom is effective for emotional engagement, skill development, and behavioral impact in respect to education as well as social and global prospect. Various tools like bookcreator, Wevideo, storybird are easily available digital tools for educators and students. The integration of technology in lecture method has enormously affected teaching learning process. In current scenario, audio visual aids are emerging as convenient way in engaging and creative manner for learning in classroom, workshops, seminars, special events and meetings. Visual presentations using audio visual aids like PowerPoint, e-games, animations, 3D models may be used for holistic understanding of concepts and boost interaction between teacher and learners. Technological tools like projectors, smart TV may use many digital platforms for demonstration of any concept or working model which may be presented in easy and effective way before learners in well planned and systematic way. The main benefit of digital demonstration is playing demo again and again and complex topics and principles may be demonstrated in easy way with no wastage of time and money. Digital technology offers construction of effective questionnaire in digital form and collection of their responses. Many tools like Quizzes, Google forms etc. may generate questionnaire for specific topic and students can answer in objective and subjective manner at their convenient time and place not only in classroom but also out of classroom. It involves Information Technology, Artificial intelligence, knowledge and Database Management, feedback, opportunities for updating in education, knowledge and behavior. Digital world offers virtual reality to learners which allow to trip digitally and experience the site in virtual way without leaving classroom. It offers 360 degree view of site in cost effective and easy accessible way for students to experience real world by sitting at one place by increasing accessibility, cost saving, enhance interactive experience, safety and uses of digital resources. Digital techniques and Artificial Intelligence provide quick and instant information from digital resources of multiple types which helps to develop critical thinking, problem solving, active learning, creativity, curiosity, team work and lifelong learning in learners. Use of digital technology in project work helps learners to collect data, interpret, analysis of data and presentation of results in effective and more convenient way via PPT, Google form, canva, animoto and manymore enhancing thinking abilities, team work, activeness, student self satisfaction, learning by doing and cooperation in various fields. Apart from these, no other method like tutorial, discussion, discovery, role-play, brain storming method, analysis and synthesis method and others are being untouched with digital technology emergence in these all [2,7-12].

Digital Classroom

A classroom well equipped with digital technology for improved teaching learning process is digital classroom. Most important aspect of digital classroom is effective learning outcome. Digital classroom used e-learning methods, online teaching and training, video presentations, PPTs and many other approaches for improvement in learners. The instant feedback is obtained in digital classroom for further modification [10-12]. Students can learn by using internet and online

resources in digital classroom. Digital classroom promises affordability for all at cost of internet in every place without any constraint of language, region, religious and gender. Digital classroom also offers easy and effective teaching process for improved learning of students. Any expertise may connect from anywhere to assist the students. The weak points of learners are immediately detected and both students and teachers may upgrade their learning and teaching effectively according to situations. Online digital resources have very high quality innovative contents which enforce teachers and learners for innovative research in concern areas. The atmosphere of digital classroom is highly interactive and innovative from both student and teacher side governing proper engaged fashion without any constraints. Digital classroom is not strict so that learners feel flexible always. It promotes collaborative nature in classroom so that concept of inclusive education for all is proved to be successful [13].

Educational App

Education at every door step is prime objective of every nation for its Holistic development and technology is a medium to make reach education unreachable. Now a day, technology is being applied in almost every direction like banking, transport, medical, defense, engineering especially after covid-19 but basic route for all is education. Today, information is obtained from internet via apps. The apps used in education are educational apps. App, a short form of application is a type of software which is installed in computer or mobile for any specific function. App obtained appropriate information from internet and delivered it to concerned person. There are millions of apps in various categories like Business, productivity, shopping, scheduling, marketing, education etc. Apps in education are important because these provide information in convenient and efficient manner. These apps are small software program designed for specific work. Educational apps can deliver educational information at any place increasing learning activity at lower cost. Apps can be used in classroom and out of classroom. School management apps offer systematic management of teaching learning in Institute via collaboration of students, teachers, management and community. Educational Apps offer systematic way of learning, smart learning, fill gaps between teachers and learners, teachers and parents, utilize Noble learning techniques, depict better engagement in students, generate new Universe of learning, fun involving program, online resources, 24×7 availability, instant updates, student performance analysis more quickly, sustainability and no gender or physical biasing. Educational Apps monitor the progress and improve performance and collaboration of students, teachers, managers and parents. Some popular education apps are questionPro used as survey software, Duolingo is used to learn or improve a language. EverNote is used for preparing notes, planning schedules, capturing photos and handwritten notes. Canva is powerful design app. Wolfram Alpha is used for complex mathematics equations. A Google doc is used to create and edit text documents. Kids Academy is used for innovative and engaging program for kid learners. Google classroom offer better collaboration with students and teachers with instant Information sharing. Google form is used for collecting information. It depicts that apps are representative of technological involvement in education for better learning outcome [13-15].

Government of INDIA is also taking effective initiative for educating peoples by use of technological development. It not only focuses on students but also on resources generation, teachers training, effective and instant assessment. In secondary education, government applied swiftchat app where student can learn by different video contents, practice test weekly and monthly and students can make self assessment and improve their learning immediately. Ministry of education, Government of India developed PM-vidya portal which unifies all efforts related to digital online education offering multimode access to education for all. It is composed of 6 portals- DIKSHA, SWAYAM, SWAYAM Prabha TV, Radio, e-content for CWSN and online coaching for competitive exams. DIKSHA is abbreviated for digital infrastructure for knowledge sharing portal and app is a large house of number of e-books and e-contents created by state and national level organizations. SWAYAM portal is designed to three principle of education i.e. access, equity and quality. It offers online course in MOOC format for schools and higher education. The courses in SWAYAM are in form of video lectures, reading materials, self assessment test and quizzes and online discussion forum for clearing doubts. SWAYAM Prabha is a free 24×7 DTH channel for education which telecast high quality education content. Radio channels are also used for remote areas where internet is not available. Govt. is also focused on CWSN children and e-contents for visually and hearing impaired learners are developed and broadcast in Gyan Amrit channel of SWAYAM Prabha. Department of Higher Education has initiative for online competitive exams IITAPL and e-Abhyas which are assisted by professors of IITs for JEE exams .IITAPL lectures are telecast at channel 22 of SWAYAM Prabha. E-Abhyas is managed by National testing agency (NTA) as learning platform for JEE and NEET students. Government is also utilizing DIKSHA and NISHTHA for teachers training for updating teachers according to modern needs. National Achievement survey (NAS) and State achievement survey (SAS) are also accomplished by online platforms. It shows that digital technology in education has not only affected students but also teachers, managers and government bodies in more convenient and efficient manner fulfilling tomorrow needs [16, 17].

Technology in Educational Media Management

Education demands effective communication between teachers and learners so that easy, effective and efficient learning outcome may results as a change in behavior of students. Communication can be verbal as oral and in written way and non-verbal like body language, facial expression and gesture. As per average, 35% is presented are verbal communication and 65% as non verbal among us. According to Lasswell communication method, world of communication is based on 5W+H i.e. who, what, whom, with what effect and in which channel and how? For effective communication 2W i.e. which and when should be added. Nature of audience as target or participatory should be kept in mind during communication. For effective communication photographs, augmented reality, virtual reality, collage, chip communication and many tools may be used keeping in mind the effective way of presentation. In education, media is a way to communicate and share information effectively. The selection of words and formation of sentences must be in proper fashion because these are only words which make your entry in anyone's heart.

The sentence should be in flow and remembered by people. Today, technology is updated day by day so it is necessary to update information management according to technology. Information should be updated by TV, radio, web, blogs etc. In modern words of digital tools, social media has an important place because everyone is like a journalist, photographer and communicator at social media. It is fast and effective platform to share information among us but use of aggressive information at social media must be avoided. Social media offers different content strategies, sharing of information, published and engagement, analysis and update information time to time. Augmented reality, virtual reality and so many tools are developed to manage social media platform in which Hootsuite, Buffer, twitter, Zohosocial and post@planner are important which manage different social media accounts from one place and offer interaction, communication, collaboration and engagement across the social media. Digital tool, blogs is used as Digital information Board. Teachers and students both can use blogs as personal diary, place for daily inputs, creativity, links, audio, videos, personal views, learning, engagement of fellow, supports for any projects and many more. Podcast is audio digital media which is used to discuss and deliver information as audio library where interview, music, thoughts can be published in audio form. Digital story telling is attractive and charming way for sharing information in education. Technology supports in writing scripts, collecting online digital resources, developing story board and recording of story and publish with software like slidestory and storybird. Engagement of creativity with media may results huge impact on communication between teachers and learners. The textbooks are also converted into audio books by using audio book creator exchange (ACX). Thus, integration of Technology empowers media management and offer multiple new ways of communication and information sharing [18-22].

Applications of Educational Technology

National Education Policy (NEP) 2020 envisioned child centered skill-oriented education to all for tomorrow India and technology is one important driven force in education which can proceed to obtain defined objectives for better tomorrow at global level [6]. Digital technology in education provides different new methods of delivery, content generation, learning, experimentation, collaboration, communication and many more. It may revolutionize education in effective and efficient manner not only in classroom but also out of classroom via its retention, storage of information, effective presentation in more interactive, easier and attractive manner, updated materials, engaging students via online available resources, generating interest, Special learning games, animations, AI designed courses, virtual classroom, e-learning platforms and online examinations as a part of educational technology [2,3,7,9]. The virtual classroom, e-learning platforms and online examinations are also results of digital technology. Some important aspects of Techno-Educo integration are given below-

Convenient teaching and Innovative learning

The role of Technology has emerged across worldwide especially after covid-19 where students have to educate in house. Digital technology used by institutions has overcome those challenging

time. Now online digital resources are easily available even AI involvement has drastically changed working culture not only in education but also in other areas like working from home etc. Thus, education Technology has filled the gap between institute and student without physical and time barriers [12, 23]. Digital Technology has transformed classroom into digital classroom where student can learn in different attractive manner without hesitation and explore information in easy and fast way. Students can make feedback immediately, can be evaluated and update himself accordingly. In digital classroom, student learns in more interactive, engaged, effective and entertaining way without any fear. Students can introduce and reinforce topic knowledge. The performance of students can be assigned, collected and graded by learning management system and keep informed to students, teachers as well as parents also [13].

Teaching for CWSN with better productivity

The word CWSN is stands for children with special need. NEP 2020 is highly focused of inclusive education to all i.e. education to a normal student, students with special needs and girl students without any difference in class. Digital technology helps physical and mental disable students to absorb concept more quickly and active participation in class. Speech recognition, screen reading tools, Braille display, text to speech, lips reading and many more are digitally assigned to help CWSN in classroom [24]. Implication of digital technology in education offers new ways of planning, convenient practical learning, quick assessment and evaluations, new digital learning resources, new skills and many more which govern better teaching learning productivity [23].

Promote distance, virtual and e-learning

Technology in education has boosted distance learning by offering easy access of educational resources from any remote areas and offered better interaction with faculties. Teachers generate groups on social media platform like whatsapp, facebook, Google meet and share information, interact and learn from distinct places [23]. Learning management system offer virtual classroom by using digital technology where a teacher can interact with student in real time, share his resources, deliver lecture, get feedback, update self and learners performance and reply to questions .Digital technology offers to produce digital resources in terms of audio, video, e-taxtbook, e-notes etc. accessible to all. Online digital libraries have also removed physical space requirement and facilitated students, teachers and researchers at global level to use information in education. It also offers online platform for discussion, evolution and assessment, teaching methods and many more [25-27].

Inclusive and flexible learning environment for better performance

Education Technology offers inclusive education at same place and same time for different types of students. Virtual classrooms, video games, robots and AI integrated platforms generate exciting environment for all types of learners. It offers more collaborative, teamwork learning and better communication between learners which is highly important for successful professional

development. Teachers may build curriculum and supportive material keeping in mind the student performance by using educational technology in classroom so education has become more accessible with multiple choice of learning techniques. Teachers track student progress and reconstruct lesson strategies accordingly improving student performance. Teachers may offer online activities to provide additional support and aids by taking instant feedback from Students. With involvement of Technology, education is being more flexible and accessible. Online degrees, online courses, online resources, assessment etc. have removed physical and social boundaries offering more excited and empowering learning. It also developed self learning abilities in students which increases production and efficiency by improving critical thinking skills. Children get new knowledge and skills through digital tools that modify confidence to pursue new interest in education areas [28].

Blended teaching learning mode, MOOCs and e-books

Blended is also known as hybrid i.e. online and offline teaching and learning whichever is suitable to student based on time, cost and access. This is future outcome of education after Covid-19. Digital technology automatically repeats education process so workload of teachers decreases. By using multiple tools and social media platforms, teachers received information from students very quickly offering very effective and efficient communication between teachers, students and parents. Teacher used Google form, online spreadsheets and social network accounts to be in touch with organization, schools, and parent and engage entire community. MOOCs i.e. massive open online course and e-books are indication of digital technological involvement in education. Implication of digital technology in education offers new ways of planning, convenient practical learning, quick assessment and evolutions, new digital learning resources, new skills and many more which govern better teaching learning productivity [29-31].

Dynamic real time learning with barrier less opportunities

Integration of Technology in classroom makes learning more dynamic and exciting. Digital textbooks, resources, links, QR code provide dynamic movement. Teachers can also get profit from technology by generating resources, management and training and also by generating productivity in classroom. Technology governs new types of interaction, building knowledge and assessing students in real time for preparing them in digital world. It offers reinvent of technological learning and working more efficiently to satisfy educational goals. The effective use of technology in teaching learning process increases multiple opportunities for students by allowing them online resources, journals and high quality data related to their work without any discrimination of time, place, cost, gender or any disability. Technology provides latest up to date data or education material for effective learning methods. By using Technology, students can communicate and collaborate directly to academic personals worldwide without any hesitation [22, 27, 28].

Quick information without learning gap

Digital technology involved excited and fun learning methods which attract students. Technology customizes the contents and tailors it for specific requirement so learner speed of learning fills gap of learning. The exchange of knowledge is faster via technology in education so student may share ideas, learning experience, communication with experts very quickly. Digital learning solutions, constructive and collaborative learning techniques make attention towards real world approaches of learning. In elementary, secondary High School education, digital learning tools of technology support students for problem solving skills, understanding emerging technologies, self motivation and making it more suitable for future education [20-28]. No doubt, Techno-Educo integration has affected educational process in more effective and efficient way and will definitely revolutionize future educational framework.

Black Impacts of Digital Technology

No doubt, technology is quite impactful on education by offering better teaching learning experience but its side effects on learners should not be untouched. Almost 90% of students spend their much time on social media instead learning. The over dependency of technology resulted lots of damage to students as well as teachers. Technology must be used as utility not as a habit in life otherwise side effects of Technology are observed in children. The students depend on Google which may deteriorate their personal creativity by promoting laziness and decrease in critical thinking. Students being isolated with technology do not interact physically so reduce socialization. Most of students divert attention towards social media which disturb learning attention. All information available at internet is not always correct so this unverified information provides wrong ideas which affect education. Online technological education offers an avenue for cheating so students should learn about digital moral and discipline for online platform. E-books are replacing textbooks so if internet is not available, your gadgets may not responding which affect learning process. Working on computer also affects handwriting. Too much uses of Technology may generate mental and health issues. Some physical disorder like eye strain, bed posture and sleeplessness may be observed in too much use of digital tools resulting obesity, diabetes and cardiovascular diseases. Cyber bullying, cyber crime, digital arrest, sex extortion may be an outcome of online platform so everyone should know about proper handling of digital technology and should not share any personal data on internet. It is highly essential for all students, teachers and parents to be aware about side effect of these technological involvements in our life. Parents can make use of control apps for safe guarding, protecting and controlling uses of technology [32, 33].

CONCLUSIONS

Education is the only key for betterment of humanity and society worldwide by developing and emerging multiple inherent qualities for human being. Technology supports education via offering innovative ways of doing work in smart, easy, efficient and attractive manner. ICT and education

have proved to be highly beneficial at both learners and teachers level especially after covid-19 fulfilling physical and gender gap via utilization of digital contents, Gamification, artificial intelligence and other approaches. Technology has revolutionized almost all traditional teaching methods via implication of digital devices, text, images, audios, videos, AI, virtual reality, animations, e-games, 3D Models by using projectors, smart boards, and other digital platforms to make learning teaching easy and effective for child centered education. Digital classroom is result of integration of technology in education depicting e-learning, online teaching and learning, instant updates in information and feedback, innovative and latest contents, better engagement and collaboration at global level. Educational apps are powerful indicators of technological involvement in terms of software offering 24×7 availability, instant knowledge, collaboration between students, teachers and community, fun loving program, better engagement without any gender and physical biasing. Government of INDIA is also highly focused on utilization of different apps and portals for educational learning, management, training, and communication in smart manner. Technology offers innovative ways of knowledge sharing and communication depicting its important role in educational media. Digital stories, Blogs, digital audio-videos, images, digital audio books and multiple social media platforms are outcomes of Techno-Educo integration. So many applications of technology in education as convenient and innovative learning, better productivity in CWSN, promotion of distance, virtual and e-learning, generation of inclusive and flexible leaning environment, blended approach of teaching learning, MOOCs, e-books and others offer new ways of planning, practical learning, assessment, evaluation, new digital resources and skills for better learning outcome offering barrier less real time learning opportunities. Definitely technology is being highly impactful in education however it's safe, secure and optimum utilization is essential in order to avoid cyber related crime, health issues and other side effects.

ACKNOWLEDGEMENT

Author is grateful to **Dr. Amit Khanna**, Head, MIS, State Institute of Education Management and Training (SIEMAT), Prayagraj, **Dr. Prabhat Kumar Mishra**, Training Officer SIEMAT, Prayagraj, **Dr. Sardar Ahmad**, Librarian SIEMAT, Prayagraj and **Dr. Pavan Savant**, Lecturer SIEMAT Prayagraj for their support, encouragement, motivation and blessings during manuscript preparation. Author is also thankful to **Sri Pankaj Jain**, Faculty of Mathematics, Govt. High School, Sunaury (Khaira), **Sri Dheeraj Singh Yadav**, Principal, Govt. High School, Sunaury (Khaira) and **Sri Om Prakash Sir**, DIOS, Lalitpur for their moral, academic and departmental support.

References

1. Doharey, R. K. (2023). Education: Meaning, definition and types, *Book chapter of Agriculture Extension Education*, S. R. Scientific Publication, New Delhi.
2. Mishra, R. S. & Gautam, S. K. (2023). Importance of Educational Technology in teaching, *International Journal of Creative Research Thoughts*, 11, 283-290.

3. Raja, R. & Nagasubramani, P. C. (2018). Impact of modern technology in education, *Journal of Applied and Advanced Research*, 3, 33-35.
4. Yadav, P. (2023). Impact of Gamification in Modern Educational Scenario, *International Journal of Novel Research and Development*, 8(11), 362-368.
5. Carvalho, C. V. D. & Coelho, A. (2022). Game-Based Learning, Gamification in Education and Serious Games, *Computers*, 1-4, 11.
6. Yadav, P. (2021). Revolutionary phase in Higher Education via National Education Policy-2020, *International Journal of Innovative Research in Technology*, 8(3), 934-937.
7. Barakina, E. Y., Popova, A. V., Gorokhova, S. S., & Voskovskaya, A. S. (2021). Digital Technologies and Artificial Intelligence Technologies in Education, *European Journal of Contemporary Education* 10, 285–296.
8. Hamiti, M. & Reka, B. (2012). Teaching with Technology, *Procedia - Social and Behavioral Sciences* 46, 1171 – 1176.
9. Pal, K. (2013). Educational Technology, *Laxmi Publication*, New Delhi.
10. Petrina, S. (2007). Advanced Teaching Methods for the Technology Classroom, *Information Science Publishing*, USA.
11. Timotheou, S., Miliou, O., Dimitriadis, Y., Sobrino, S. V., Giannoutsou, N., Cachia, R., Monés A. M., & Ioannou, A. (2023). Impacts of digital technologies on education and factors influencing schools' digital capacity and transformation: A literature review, *Education and Information Technologies* 28, 6695–6726.
12. Collis, B. (2002). Information technologies for education and training, *Handbook on Information Technologies for Education and Training*, Springer, Berlin, 1–20.
13. Haleem, A., Javaid, M., Qadri, M. A. & Suman, R. (2022). Understanding the role of digital technologies in education: A review, *Sustainable Operations and Computers* 3, 275–285.
14. Menon, D., (2022). Uses and gratifications of educational apps: A study during COVID-19 pandemic, *Computers and Education* 3, 10007.
15. Lazaro, G. R. & Duarte, J. M. (2023). Moving Learning: A Systematic Review of Mobile Learning Applications for Online Higher Education, *Journal of New Approaches in Educational Research* 12(2), 198-224.
16. Javaid, M., Haleem, A., Singh, R. P., Haq, M. I. U., Raina, A. & Suman, R. (2020). Industry 5.0: Potential applications in COVID-19, *Journal of Industrial Integration and Management* 5, 507–530.
17. Kumar, K. S., & Mahendraprabu, M. (2021). Open educational practices of SWAYAM programme among research scholars, *Education and Information Technologies* 26, 4621-4645.
18. Hsu, J. (2007). Innovative technologies for education and learning: Education and knowledge-oriented applications of blogs, wikis, podcasts, and more, *International Journal of Information and Communication Technology Education (IJICTE)* 3, 70–89.

19. Lacka, E. & Wong, T. C. (2021). Examining the impact of digital technologies on student's higher education outcomes: the case of the virtual learning environment and social media, *Studies in Higher Education* 46, 1621–1634.
20. Murod, U., Suvankulov, B., Bakiyeva M. & Nusratova, D. (2021). Fundamentals of Creation and Use of Interactive Electronic Courses on the Basis of Multimedia Technologies, *Annals of the Romanian Society for Cell Biology* 25(4), 6860–6865.
21. Kesim, M. & Ozarslan, Y. (2012). Augmented reality in education: current technologies and the potential for education, *Procedia-social and behavioral sciences* 47, 297–302.
22. Mehrfard, A., Fotouhi, J., Taylor, G., Forster, T., Armand, M., Navab, N. & Fuerst, B. (2021). Virtual reality technologies for clinical education: evaluation metrics and comparative analysis, *Computer Methods in Biomechanics and Biomedical Engineering Imaging & Visualisation* 9 (3), 233–242.
23. Ain, Q. U., Shahid, F., Aleem, M., Islam, M, A., Iqbal, M. A. & Yousaf, M. M. (2019). A Review of Technological Tools in Teaching and Learning Computer Science, *EURASIA Journal of Mathematics, Science and Technology Education*, 15, em1773.
24. Yin, R. K. & Moore, G. B. (1987). The use of advanced technologies in special education: Prospects from robotics, artificial intelligence and computer simulation, *J. Learning Disability* 20 (1) 60–63.
25. Jevsikova, T., Stupurienė, G., Stumbrienė, D., Juskeviciene, A. & Dagienė, V. (2021). Acceptance of distance learning technologies by teachers: determining factors and emergency state influence, *Informatica* 32, 517–542.
26. Vavoula, V., Sharples, M., Lonsdale, P., Rudman, P. & Meek, J. (2007). Learning Bridges: a role for mobile technologies in education, *Educational Technology* 47, 33–37.
27. Abdullayev, A. A. (2020). System of information and communication technologies in the education, *Science and world International scientific journal* 2, 19–21.
28. Barakina, E. Y., Popova, A. V., Gorokhova, S. S. & Voskovskaya, A. S. (2021). Digital Technologies and Artificial Intelligence Technologies in Education, *European Journal of Contemporary Education* 10, 285–296.
29. Makkar, N. & Sharma, R. (2022). Effect of blended learning on academic achievement in mathematics among IX grade students, *The International Journal of Indian Psychology* 10(2), 1348-1357.
30. Ciftci, B. (2020). The Effect of Blended Learning on Academic Achievement and Attitudes at Social Studies Courses. *Open Journal for Educational Research*, 4(2), 143-150.
31. Alseweed, M. A. (2013). Student's achievement and attitudes toward using traditional learning, blended learning, and virtual classes learning in teaching and learning at the university level. *Studies in Literature and Language*, 6(1), 65- 73.
32. Yadav, P. (2022). Intercorrelation between Digitalization and Women Empowerment, *British Journal of Multidisciplinary and Advanced studies*, 3(1), 1-6.

33. Sunte, J. (2023). The digital Application Drawbacks in Current and Future Era, Research and Applications, *Emerging Technologies* 5(2), 28-31.