

Digital Society: A New Development to Social Progress and e-Education

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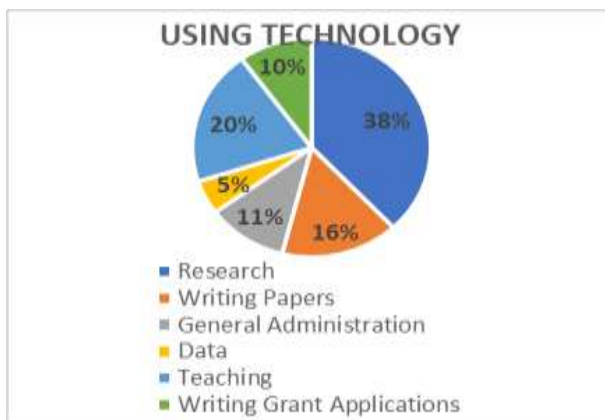
Abstract:

The Internet and application of AI have evolved remarkably during the last 30 years. The advantages of Internet's information have been become richer and more diverse, particularly as the number of users worldwide increased; the Internet is no longer only linking information; it is now connecting people globally. The user's role shifted from consumers to data contributor and creator. For example, in big metropolitan locations, calling a cab service is as simple as by pressing a button on a mobile using application services such as Uber, Rapido, Ola etc. and we can track them easily. But where AI tools are increasing there the online risks, cybercrimes and data robberies also rising. The users need to take certain precautions to prevent them. The present article is focusing on digital technology with impact on society, smart cities digital facilities, evolution of digitalization in India, e-Education/e-learning in Indian digital Society and emerging innovative technologies. Indian Central and State government implementations for e-education and on-working programs focused. This article also throws light on how the technologies empowers the cities and education with their importance to make digitalized and also discusses the difficult balance between digitalization and sustainability.

Keywords: Digitalization, Innovation, Digital Society, Evolution, E-Education, Technology, AI generators, challenges.

INTRODUCTION TO DIGITAL TECHNOLOGY WITH IMPACT ON SOCIETY:

Technology is transforming everything in the world. The country became window of the world. There are drastic changes we have been observing in the fields of every field. The speed of today's changes are the key challenges to the world. People's thinking, dressing, food habits, living style, education, business, health are changing. This brings tremendous progress and wealth across the globe as result the society becomes digitalized. Technology is implementing everywhere in society. It was scientifically recognized the data of using technology in different fields. In the Research sector technology is consuming for Research 38 %, for writing articles and papers 16%, for General administrative purpose 11%, for Data



Pie chart of Technology usage in the 21st C (Google Sourcure)

5%, for Teaching and learning process 20% and Writing grant applications 10%. According to the survey technology is effectively utilizing in the research fields more than the other and least percentage for data purpose, (Society 5: *Industry of the Future, Technologies,2018*)

Technology is very helpful not only making our works easy but also it is helpful to gain money. With the online medium such as YouTube, Twitter, Instagram, WhatsApp, chat GPT and other AI tools many people earning money. We must appreciate the technology that it does not need education. Illiterates also operating many digital godets and tools very easily. Many difficult tasks too we can solve very easily with the AI tool. Hence, we are completely relying on them. As results we are in the hands of technology.

There are three major aspect which are very important and will make more impact for digitalization. They are data, algorithms and bots. Present days data is more valuable than gold. Online hackers need data is very much. They try many tricks and scams to get information from the netizens. Once they got important data from the consumers they can easily loot (money, personal information, ATM (credit/debit) card info. Etc.) anything from online network. Keeping data safe and secure is very difficult. Next comes Algorithms. Algorithm is a word magic with technology. In other way we can explain it as a life-threatening gateway to the information. Whatever we enter in the online that can be filtered and saved by the computer in online. Hence it is a self-regulated sets of operational levels that need to be performed. Of course, it was created by man that credit goes to human but now it can create more than tasks what the man can do. Another one must discuss. That is Bots. In the digital world we are living in the digital processers. They play significant role in humans jobs handlings and future actions. So that humans are replaced by programs and robots. With the AI technology robots are doing more and multiple tasks effortlessly and quickly than humans. Auto generated and mechanical works can be done by robots with short span of time. Therefore, in the advanced technology data, algorithm and bots are play magnificent role. These will impact the world and maintain social sustainability in our society.

This is a new era where Digital Transformation ultimately to the peak. Changing the



General AI Agents in the Social Media

game, and enabling new models of society often based on sharing, which is a key principle of sustainability thinking. Particularly Mobile applications have invaded our society to an extent that we can't imagine living without them. To a common person, a mobile app is a function that simplifies some work just by a click of a button of their mobile. For some tech-persons, mobile apps are nothing

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but a computer-generated program. With these they can create anything by software applications which are constructed to run on various mobile devices, such as iPhone, smartphones, tablets etc.

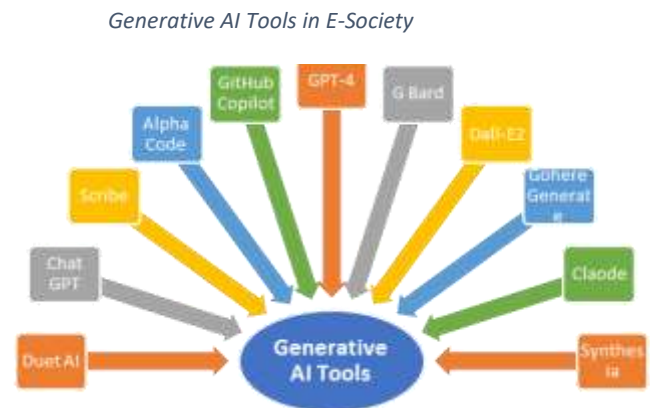
Present generation is using different Web Apps to beat their daily needs. When applications are accessed from internet by using a web-browser, immediately it became turned as web app. From them they are functional and interactive. People need not to create them. They are available readily to use. Customers can use cross-platform, CSS/JavaScript, standard web technologies like HTML and so on as web app. Therefore, they can download as like as mobile apps. Similarly, they can load on browsers like Chrome/Firefox. Hence, the apps do not consume any memory or storage space occupies in the users' devices. Consequently, as a web app can be used in any mobile without any disturbance. Like Android, iOS and Windows. But these types of mobile devices not support the device-level features like push-notification, work offline and load on the home screen. Both the mobile apps and web apps are used by the people as general AI agents. They are: Siri, Apple, New Google, Alexa/Amazon, Cortana Microsoft. Viv/ Viv Labs, Message Apple, Messenger, Whatsapp, Facebook, Slack, WhChat Tencent, Kik, Allo Google, Telegram, Twilio, Line Naver, Skype Microsoft

Indian government has launched digital India program on July 1, 2015 by Honorable Prime Minister Sri Narendra Modi with a clear vision to transform India as a digitally empowered society with great knowledgeable economy. To achieve this vision incorporate some strategies, they are, digital infrastructure is a core utility to every citizen, governance and immediate services on demand, digital empowerment of citizen. Recently the digital India Act fully replaced by the current Information Technology Act (IT Act) of 2000 by early 2023.

Innovative AI Generating Tools:

Present days everything in our surrounding is changing extremely. This has defined the fifth societal wave. In cities it can be named as "Society 5.0". It is also named as "society of intelligence", in where physical space and cyberspace are powerfully united together in the social life. Actually, the term was firstly used in Japan in 2016 from then it has been widely spreading. Consequently, its fundamental

ideas shaping the world. Present days tremendously consuming innovative AI generative tools to fulfil daily needs, such as Duet AI, Chat GPT, Scribe, Alpha Code, GitHub Copilot, GPT-4, G Bard, Dall-E2, Gohere Generate, Claude, Synthesis etc. These are most advanced tools which are using effortlessly in the smart cities. In the smart cities computing tools, artificial intelligence, the possibilities of memories and algorithms are using very effectively by people. The "basic plan for science and technology" is a wide-ranging plan for the promotion of science and technology for the social progress. (Society 5.0: Industry of the Future, Technologies, Methods and Tools).



Platform economy and “servitization”:

The birth of the platform economy is a developing reality. This new economy is characterized by the passage from a possession-oriented economy to a new economy, featuring a form of “servitization”, a phenomenon which we will describe in this book. This economy sources in the smart cities of the platform is wider than that of sharing. “Uber is simply a software tool. Even though it has no cars, Uber has become the largest taxi company in the world. Airbnb is currently the largest hotel chain in the world, despite the fact that it does not have any facilities”. Like other services also we can see in the society. They are Rapido, Ola and other services work with digital technology and main source for economy development. (Society 5.0.)

Initiations to Digital India:

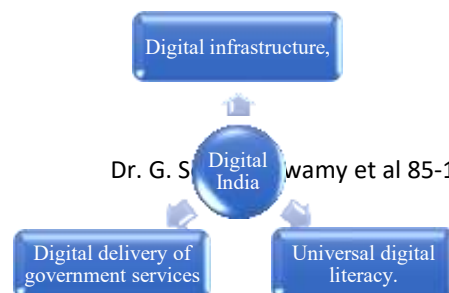
Digital India program has started by the Government of India to make its services available to all the citizens electronically through upgraded online infrastructure services and augmented internet connectivity. The initiative includes different accurate plans to connect rural areas with high-speed internet networks.

Digital India program launched by Indian Prime Minister Narendra Modi on 1st July 2015. It supports with other Government of India’s other schemes, such as BharatNet, Standup India, Startup India, Make in India, industrial corridors, Bharatmala Sagarmala, Amrit Bharat Station Scheme and Atmanirbhar Bharat. Digital India Program will be implemented in different phases. Later it transformed its nature and certified that government services are electronically accessible to citizens. It also brings public accountability through mandatory delivery of government services electronically.

The main source of the funding for e-governance projects is financially having allocations with the respective Ministries, departments of the central and state Governments. Funding requirements for individual project/projects for Digital India to be worked out by the respective nodal ministries and other departments.

In 1954, W. Howard Gammon wrote an e-government research paper on the use of Information and Communication Technology. In the paper he discussed importance of providing good governance. He also said that internet, SMS and different mobile apps are very helpful for people to access information quickly. Henceforward, the data access has become very inexpensive owing to the cost of competitiveness among many companies. Now they are being used in education, banking, railway and other governance issues. The government has started utilization of internet to serve common people through e-governance. In the 21st Century, completely transforming into digital society by sophisticated AI agents; Telegram, Face book, Messenger, WhatsApp, Slack, Skype, Viv and so on. Thus, the fourth industrial revolution will transform most of the traditional industries by few years. These kinds of technologies are called artificial intelligence, robotics and 3D printings.

Components of Digital India: Indiana government is hardly trying to enhance technological use in the all services. Even a



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common man should have to use technology very easily. Therefore, the government is giving importance on the three areas. They focus on firstly, development of secure and sustainable digital infrastructure, secondly digital delivery of government services, and thirdly, universal digital literacy.

The Union Ministry of Electronic Information Technology has taken up various schemes to accelerate development of implementation in India. All these are in line with the G-20 Joint Declaration 2023, which emphasizes the responsible and inclusive use of AI for the public good. As a part of this, many other programs have been undertaken in the online portal, capacity building, research centers, international cooperation etc., all these are the responsibilities taken by the government. All these contribute to the design of responsible AI and India's role in promoting responsible use of AI for the public good along with the achievement of Sustainable Development Goals. *It also complies with the International Directive on the Use of AI for Special Purposes*

The aim of Digital India Program is transform India into a digitally to empowered society and knowledge economy. This is a follow-up to the key decisions taken in the Prime Minister's meeting on Digital India Program on August 7, 2014. The main target is to sensitize all Ministries to this vast program that touches every corner of the Government. This program is projected by the Department of Electronics and Information Technology (DeitY) for the further actions.

Vision Areas of Digital India:

No task can be successful without a well plan. Consequently, government has planned to provide good services from low level to higher level. So that highspeed internet facility will be available, for this the first initiation started in all Gram Panchayats. Achieved digital identity in the way of unique, lifelong, online and authentic, a mobile phone and a bank account enable participation in the digital and financial space at an individual level, easy access to a common service center in their area, a private space that can be shared in a public cloud freely without any hurdles. Furthermore, providing a safe and secure cyber-space for people in the country.

Scope of Digital India:

The inclusive scope of digital India program is to make India for the future of science. Even a poor and illiterate have to use the technology easily.

- Giving importance to 3 ITs. They are: Transforming IT (Indian Talent) IT (Information Technology) and IT (India Tomorrow)
- Creating technology, a central to enabling changes and trying to provide wide range of technology for all the people from remote rural to urban.
- Part of an umbrella program, it covers many disciplinary programs bring together with a large number of ideas and concepts into a single, comprehensive vision. So that each of them can be seen as part of a bigger goal.
- Each individual stands on its own, but is also part of the bigger picture. Working together and making the mission as a whole. The Digital India program integrates several existing schemes, which restricts and implement in a synchronized manner. Consequently, the

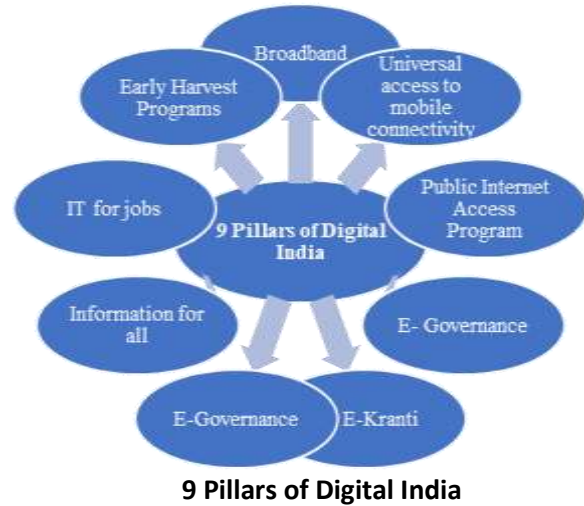
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common branding of the programs as Digital India highlights their transformative impact. The main aim is every individual of Indian should have get technological benefits well.

Nine Pillars of Digital India Program:

Indian government doing more established programmes to make India digitalized. For this reason conducting and implementing many programs and plans. Under this it gave importance for nine core aspects. These nine aspects are called as Pillars of to make Indiadigitalized.

1. Broadband Highways
2. Universal access to mobile connectivity
3. Public Internet Access Program
4. E-Governance (Reforming Government through Technology)
5. E-Kranti (Electronic Delivery of Services)
6. Information for all.
7. Manufacturing of Electronics
8. IT for jobs
9. Early Harvest Programs.



Methodology to Execute Digital India:

- Ministries, departments and states fully influence the general and supporting ICT infrastructure to establish by the Government of India.
- Existing and ongoing e-governance initiatives will be restored in the line with Digital India principles.
- Scope enhancement, process reengineering, integrated States are given flexibility to identify and include additional state-specific projects appropriate to their socio-economic needs.
- Adoption of unique ID is promoted to facilitate accurate identification, authentication and delivery of better benefits.
- NIC reorganization will be undertaken to strengthen IT. So that only it can support to all government departments at the center and state levels.
- Achievements are recognized and their reproduction is actively promoted.
- Giving more important to public private partnerships and preferred priority wherever possible.
- Creating new positions like Chief Information Officers (CIO) with at least 10 key ministries so as to various e-governance projects can be designed, developed and implemented rapidly.
- DeitY creates necessary senior positions in the department for program management.
- Union Ministries, departments and state Governments have complete responsibility to implementation of various missions, modes and other projects under this digital India program. As a result, considering the need for overall integration and integration at the national level.

- Well-thought-out appropriate actions to implement Digital India as a program with well-defined roles and responsibilities from each activity.

Program Structure for Management:

Transforming huge populated country into digital country is really a herculean task. Perfect plan of action, accurate strategy and supports must be needed. Therefore, a programme management structure will be set up to monitor implementation. The significant components of the management structures will be a monitoring committee headed by the Prime Minister, a Cabinet Committee on Economic Affairs (CCEA) for project-wise approval have set. Then external website opens from a new window, a Digital India advisory group chaired by the Minister of communications and IT, an Apex Committee chaired by the Cabinet secretary, a Finance Committee and Committee on Non-Plan Expenditure (CNE). These committees work effectively for digital India.

Ground work for Digital India:

The foundation must be very strong for any work. It is very much important for any work to make successful. Despite India being known as a software powerhouse, the availability of electronic government services to citizens is still low. The National e-Governance Plan approved in 2006 has made steady progress through mission mode projects and core ICT infrastructure, but more emphasis is needed to ensure effective progress in electronics manufacturing and e-governance in the country. Therefore, Digital India's vision provides a strong impetus for further momentum and progress for this initiative. With the purpose of it promotes inclusive growth, covering electronic services, products, devices, manufacturing and employment opportunities. 21st century India should strive to fulfill the aspirations of its citizens, where government and its services reach the doorsteps of citizens and contribute to long-term positive impact. Digital India Program aims to transform India into a digitally empowered society and a knowledge economy by influencing IT as the growth engine of a new India.

The World Bank, which will soon issue the first block chain band, is preparing to walk freely towards the digital financial world. The company has announced that it will soon start the issuance of bonds that are being issued entirely with the knowledge of block chain. Experts analyze that this development paves the way for the golden future of financial services in developing countries.

Mobile and Web Apps: Digitalization for productive development:

Electronics have various forms of applications. They are useful to make electronic payments, for banking gateways and E-governance. From a street-vendors to an international business men are making transactions by mobile apps (Phone pay, G-pay etc.). E-payments are the best form of payment across the universe by e-credi/debit cards, e-cash, e-wallets and purchasing cards. E-commerce plays an important role in the banking fields. It works like a gateway to the customers and the bank/bankers for bank transactions. Indian government has initiated E-governance by online payments for all the bills, tax, loan EMIs, revenues etc. To make this E-commerce successful government of India has launched BHIM (Bharat Interface for Money). It empowers secure, reliable, fast cashless transactions and payment by mobile phones.

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BHIM is internally connected with an application, UPI (Unified Payments Interface). Subsequently e-cash transactions are become very easier and faster. Along with BHIM additionally NPCI (National Payment Corporation of India) is developed. It is also a part of the Digital India.

Black chain: An Innovative Invention

It is a digital transaction register with the help of a network (PR to PR) between computers and transactions are recorded on it and changes are made with the consent of the members of the network. Even the network administrators are not able to break into these and make changes, so every transaction registered from the beginning will remain the same. This ensures that every transaction recorded from the beginning remains intact and no third-party intervention is required to approve them, providing a robust security system for financial services. Blockchain technology is what drives crypto currencies like, Bitcoin, Refill. Ethereum currencies are currently not backed by any central bank.

With this, the new bonds will be sold on the common currency (Australian dollar) with a two-year time limit. It is possible that the preparations for the process of issuing these bonds will come to an end by the 20th of this month. The organization hopes to raise Rs 252.3 crore (50 million Australian dollars) through these efforts, describing the work as the brainchild of World Bank innovation research. For this, the company has been working with the Commonwealth Bank of Australia since a year, with which the technology giant Microsoft has partnered. It is no exaggeration that India will also make the block chain system available to the people in the coming year.

Many things have become easy in the digital revolution, people feel that all the information in the world is at their fingertips. They think that they can look at everything in the world and see the view of it. They think that this technology has made life easier. They book a tour by sitting at home with an app, Buy air tickets. Pay the current bill, Salts and vegetables are brought home. These things are not so straightforward and easy. Dependence on mobile information has made people imperfect characters. In mobile, the world is full of rumors and facts are few. Good things are forwarded less with mobile, but unnecessary jokes, obscene videos, clippings, celebratory photos, and mind-blowing advertisements are seen more.

To oppose someone means to spread lies against them through mobile phone and bring Indecent cartoons, mocking wives and husbands are becoming so prevalent that the right things have no place and are endlessly changing. Choose your own path to move forward and don't choose the path of technology and follow someone else's path.

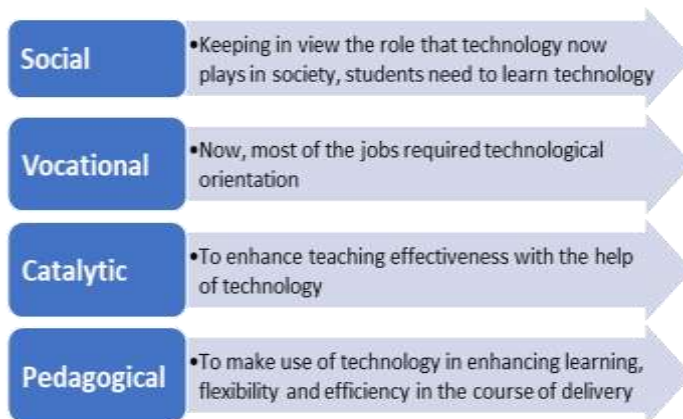
EVOLUTION OF E-EDUCATION IN DIGITAL SOCIETY:

Technology replaced new tools in the place old tools (radio, TV, Telephone). The new tools are computers, internet, wireless technology, satellite and AI. These different tools are now able to work together and combine to form our networked world, where we have a massive infrastructure of interconnected services, standardized computing hardware, the internet etc, which reaches into every nook and corner of the globe. There is many research has done on technology. United Nations Development Programme (UNDP) given a definition, that ICT is

basically information-handling tool, such as a varied set of goods, applications, and services that are used to produce, to store, to process, to distribute and to exchange information.

The optimum use of technology in Idina's education system can propel the county to become a knowledge superpower. The innovative use of information technology (IT) in educational system addresses the three fundamental challenges, such as access, equity and equality. The conventional and more familiar technologies are referred under the collective heading of analogue media, while the newer computer and internet-based technologies are called the digital media.

Basic Rationales for Introducing Technology in Education



According to Gross and Adam, there are four basic rationales behind introducing ICT in education. They are, Social, Vocational, Catalytic and Pedagogical. Social means Keeping in view the role that technology now plays in society, students need to learn technology. Vocational consists from to school to college level to support vocational education.

Nowadays, all the job fields required technological knowledge. Hence technology is inevitable in the present generation. Consequently, it is necessary to enhance teaching effectiveness with the help of technology.

Enormous number of unconventional technological tools, apps and software are available. These are necessary in education sector for teleconferencing, e-mail, audio conferencing, broadcasts, interactives, compact discs, AI and AR tools. When we apply in education for making education as E-education/learning.

In today's society, technology dominates in almost all types of sectors. In the field of education, technology is actively contributing to both teaching and learning processes. Traditional education/teaching replaced with e-education, e-teaching and e-learning. Constantly updated technology is making easier for teachers and students to access education. In addition to the various conveniences obtained from the existence of technology, there are positive and negative impact obtained from the existence of technology in the word of education.

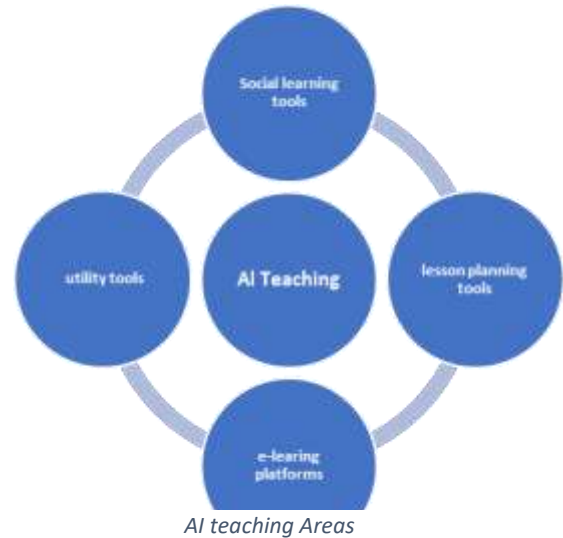
Introduction "Digital education is generating new learning opportunities as students engage in online, digital environments and as facility change educational practices through the use of hybrid courses, personalized instruction, new collaboration models and a wide array of innovative, engaging learning strategies. Furthermore, a 21st century view of learner success requires students to not only be thoughtful consumers of digital content, but effective and collaborative creators of digital media, demonstrating competencies and communicating ideas

through dynamic storytelling, data visualization and content curation.” (*Vawn Himmelsbach. 6 Pros & Cons of Technology*, 2019)

Competencies of Digital Education:

Digital Education platforms can tailor learning experiences to individual student needs, consenting for customized learning paths and level based on their strengths and weaknesses. It Makes students smarter, personalized learning, makes students acquainted with digital technologies and tools, deeper involvement of teachers and parents, a better engagement rate, makes students more accountable, extensive learning opportunities, motivates students.

In the contemporary society, different types of digital technology are included in Education. Such as: Interactive Learning software, e-book and digital textbooks, smart-classroom and interactive whiteboards, digital assessments, learning management systems (LMS), Adaptive learning systems, learning analytics. Moreover, in Education there are extensively AI Tools are using in the different aspects. They are: Social learning tools, lesson planning tools, e-learning platforms and utility tools.



Employing technology in education is not a recent phenomenon. Historical advancements, such as the invention of paper, printing press, radio, film, television, and computers, have all left a lasting influence in the field of e-education. New NEP 2020 also emphasizing digital education, critical thinking and problem skills of students.

There are a number of educational digital tools and apps are establishing extensively. The most prevalently using learning tools are: LinkedIn Learning, Coursera, Hurix, Udemy, Skillshare, Open edX and edX, Google Classroom, Docebo and Blackboard Learn. Additionally, there are ten amazing powerful innovative teaching tools of the future edudemic into the Driver’s seat; such as, Came-Based learning, Connectedness, Crowdsourcing, project-based learning, digital and physical merge, virtual learning, evolved currencies, Personalization, Gamification, social media.

Essential Digital Skills in the 21st century:

As students move forward with technology, there is a great need for teachers to improve their skills to keep up with technology. Day by day revolutionary changes and developments occurring with AI and AR tools in Education sector. According to the online AI information there are certain skills and digital websites are required teachers and students. They have to use/using promptly. The skills are: recording and editing audio clips, creating interactive video contents, creating infographics and posters, creating PLNs, connectors, discovering new contents, and growing professionally, using blogs and wikis to creating participatory spaces for students, create engaging presentations, create digital portfolios, curate, organize and stage

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digital resources and create digital quizzes. To digitalize the educational sector government is conducting many training programs and workshops to contrivance AI techniques and tools for teachers and students to use and implement them.

Implementing digital technology in education makes classroom more active, innovative and interesting. the classroom can track student progress and provide valuable data to teachers, allowing for timely interventions and adjustments to teaching methods.

Developments and Initiatives for E-Education in India:

India is a big country of unity in diversity. It is the cradle of all castes and religions. However, in this 21st Century, it is a developing country that is moving forward in all fields.

Advance Digital Skills and AI tools in the 21 st Century	
Skill	AI tools
To recording and editing audio clips	Soundcloud.com/ Sudioboom.com/Vocaroo.com/Clyp.it
To creating interactive videos content	Youtube Video Editor Wevideo.com,Magisto.com/Animoto.com
To creating infographics and posters	Piktochart.com/Canva.com Drawings.google.com/Thinglink.com
To creating PLNs, Connectors, discovering new contents, and grow professionally	Twitter.com/Facebook.com Plus.google.com/Linkedin.com
To use blogs and wikis to create participatory spaces for different students	Blogger.com/Wordpress.com Edublogs.org/Wikispaces.com
To create presentations	Doc.google.com/Haikudeck.com/Zoho.come/Pre zi.com
To create digital portfolios	Web.seesaw.me/Silk.co/Sites.google.com/Weebl y.com
To create, organize and stage digital resources	Diigo.com/Scoop.it/Educlipper.net/Edshelf.com
To create digital quizzes	Flipquiz.me/Riddle.com/Quizalize.com/Testmoz .com

Most importantly, India is at the forefront of all areas; Education, Business, Health and Medical. Especially in the field of education, it takes the path towards development of implementing advanced methods in the schools, colleges and universities. Central and state governments in India are doing their best to make digital India as well as digital education. From time to time, new techniques and methods are advancing to digitalize education through Acts and programs.

Digital education has taken become a major force in India in the recent times. Generally digital education can take many forms, such as courses and platforms, educational apps, interactive multimedia, assessments and tests, e-books and digital textbooks etc.

Government has been Initiating more advanced programs for Digital Education in India. Regularly creating and implementing new acts and regulations. Consequently, integrating new technologies for the need of people and updating provisions in the Indian legal landscape. Recently regarding Digital India, new Act passed in 2024, it also covers technological

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advancements like 5G Integration, IoT devices, metaverse, cryptocurrency, and cloud computing. The new NEP-2020 aims to upsurge the Gross Enrollment Ratio (GER) in higher education by 2035, positioning India as a global educational destination. The policy introduces curriculum flexibility through interdisciplinary approaches, multiple exit options, and promotes international collaboration. Arvind Gupta, Head and Co-Founder of Digital India Foundation implemented a policy think tank working in areas of digital inclusion, smart cities, internet governance, data privacy and cyber security, electronics manufacturing etc. Therefore, to make it successful Indian government has established many online initiating programs. Such as, SWAYAM-Indians own MOOCs (Study Webs of Active Learning for Young Aspiring Minds), e-Pathshala. Swayam Prabha, National Digital Library (NDL, containing more than 6.5 million books), DIKSHA, National Academic Depository, National Repository of Open Educational Resources (NROER), Digi Locks, Virtual Labs, National Programme on Technology Enhanced Learning (NPTEL), Pragyatah and others. Like many digital initiating programs are consuming. But some of them are discussing below briefly.

SWAYAM PRABHA: It is established in 2017 by providing 32 educational DTH channels. The SWAYAM PRABHA has been conceived as the project for telecasting high quality educational programmes through 32 DTH channels on 24X7 basis. Every day, there will be new content telecast in the time span of four that would be repeated six times in a day. It allows the students to choose the time of their convenience. The DTH channels cover curricula-based courses which are diverse disciplines such as; arts, social sciences and humanities subjects, engineering, technology, law, medicine, agriculture etc.. SWAYM PRABHA covers school education from 9 to 12 levels modules. It focuses curricula and courses that can meet the needs of life-long learners or Indian citizens from India or abroad. IIT-PAL is to assist the students from the Classes 11 and 12 aspiring to join IITs-T the four channels under this would be on Physics, Mathematics, Biology and Chemistry.

DIKSHA: It is a digital infrastructure for knowledge sharing. Which was initiated in the year 2017 with the vision of 'one nation and one digital platform'. It is a good boon for grade I to XII students. It is a national platform and worked through online web portal or from mobile app. It has various content material in respective to the curriculum. This program also consists with many assignments which are helpful the enhance the knowledge of students. It also offers different courses for educators as well. To give at most services it has made an association with Tata Sky and Airtel to telecast these educational programs nationally.

NPTEL- (National Programme on Technology Enhanced Learning):

It was initiated by seven Indian major Institutes of Technology: Kharagpur, Bombay, Madras, Guwahati, Kanpur, Delhi, and Roorkee. From 2003 these institutes work along with the Indian Institute of Science, Bangalore. NPTEL covers five core disciplines: computer science, civil engineering, electrical engineering, electronics and communication-engineering and mechanical engineering. And also provides 235 course in the form of web/video format for the students/ learners benefit.

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E-Pathshala: e-pathshala works for not only students but also teachers and parents. Through a web portal or from a mobile app anybody can be accessed. There are more than 3500+ E-textbooks with curriculum contents in different languages like Sanskrit, Hindi, Urdu, and English,

Nipun Bharath (2021): Nipun Bharat is India's program to better foundational education programming literacy and numeracy skills for students.

PM Shri (2022): 'Pradhan Mantri School for rising India', aims to enhance education quality national wide. Providing accessibility, high quality, schooling to empower youth for India's progress.

Pragyata (2020): It is released by HRD Minister. It guidelines on digital education on administrators, school heads, teachers, parents and students in e-learning.

e - Acharya: This is also called 'Integrated e-content portal'. It has connection with NMEICT. E-content and all content produced under NMEICT, it is worked at this repository platform in INFILIBNET. The basic tenets of preservation for digital content, implement standard metadata and schema. Contents are mostly provided by NCERT program.

TOSSEE - The Free and Open Source Software for Education: FOSSEE project sanctioned to IIT Bombay has been promoting use of open source software in educational institutions (<http://focssee/in>). It does through instructional material, such as spoken tutorials, documentation, such as textbook companions, awareness programmes, such as conferences, training workshops, and internships. Textbook companion (TBC) is a collection of code for solved examples of standard textbooks. Scilab and Python TBCs are also on the cloud.

e-Kalpa: It is an another MHRD/NMEICT initiative for digital education. It is created Digital-Learning Environment for Design in India. It has successfully achieved the objectives: Digital online content for learning design with e-learning programs on Design, Digital Design Resource Database including the craft sector, social networking for High learning with collaborative learning space for design, design inputs for products of national mission in education through ICT.

e-Vidwan: The Information and Library Network (INFLIBNET) centre took the initiative called 'Vidwan'. Which has Expert Database and National Researcher's Network with the financial support from NMEICT. It collects the academic and research profiles of scientists, faculty and research scientist working in leading academic and R and D organizations in India and abroad; quickly and conveniently provide information, establish communication directly with the experts, identify peer reviews for review of articles and research proposals and create information and networking opportunities among scientists.

Other digital initiatives are Lekhika, NPTEL, NKN, CDEEP, DUSAT, IIMs, Brihaspati, e-text books, open resources education, Virtual Technical University (VTU), Gyan darshank e-Gyankosh, ERNET, Sakshat portal, GRID GARUDA, Shruti-drishti and consortium for educational communications.

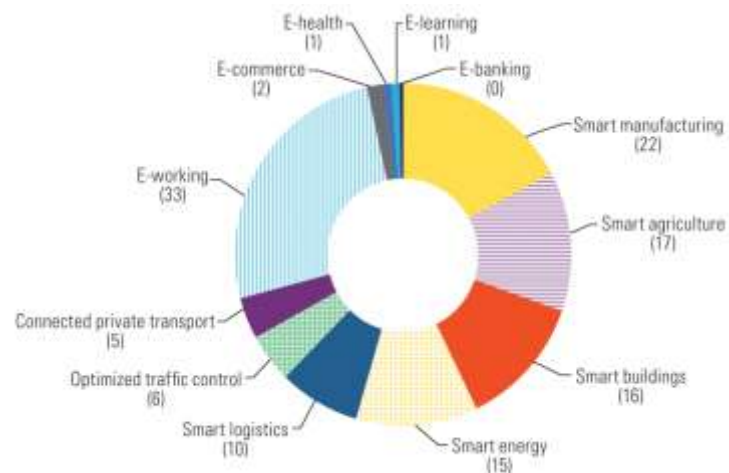
Central Cloud Infrastructure: Central cloud infrastructure is another advance and innovative implementation in India. To connect people with the technology government has started this

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recently. The MHRD under NMEICT has awarded a project to IIT Delhi, to set up a robust 24/7 backed data centre and the activities have been put up at NIC/NKN Data centre and the cloud is called 'Baadal'. The IIT Delhi cloud is hosting e-content and video content of e-acharya. Central and state governments are working hard to make 'Digital India'. They expect to give a communication by 'Kranti' to the country people. Governments are taken significant initiatives to lead the programs successfully but there are several glitches and challenges to be encountered from different aspects. Government sectors managements and departments have to tie-up and involve to make the program success. To democratize the opportunities of quality education, the Government has launched the National Mission on Education through ICT (NMEICT) to translate the power of IT into expanded learning opportunities. Over a period of time, NMEICT has made significant gains by developing IT interventions that have potential to change the education scenario.

The Balance between Digitalization and Sustainability:

Digital technologies foster ecological innovations that contribute to sustainable development by reducing environmental impacts and optimizing resource use. As these technologies evolve and converge with biotechnology and nanotechnology, they could generate exponential innovations that contribute to a sustainable future. In the society each and every sector becoming digitalized. General and living services became changed as e-health, e-learning, e-banking, e-manufacturing, e-agri, e-buildings, e-energy, e-logistics, e-traffic control, e-transport, e-working, e-commerce etc, Digitalization always has both positive and negative impacts. On the one hand, it can dematerialize the economy by facilitating the supply of the digital goods and services that represent an increasingly large part of the economy and exports. Another side is an increase in the importance of digitally supplied services which are reduce movements and thence emissions. Hence more profound changes occur in consumption, so that it is expected with the development of the products as a service, according to the PaaS model, which makes that it was more possible to compare the desired outcome of using a product without purchasing it. Finally mobility as a service (MaaS) uses this model to combine transport services from side of public and private providers through a unified gateway which creates and manages further journeys. (*Advantages and Disadvantages of Technology in Education*, June 29, 2015).



Source: Global e-Sustainability Initiative (GeSI), #SMARTer2030: ICT Solutions for 21st Century Challenges, Brussels, 2015 [online] <https://smarter2030.gesi.org/>

There are key challenges affecting the application of Information Technology (IT) and Information Communication and Development in Indian e-education. To use technology everyone needs desired knowledge and interest for good purpose. Lack of desired knowledge and readiness, interest, poor implementation and linguistic barriers are major difficulties.

Conclusion:

Technology became part and parcel of day-to-day life. From a small vegetable vendor to an international businessman, everyone has become habituated to digital world. No matter how digitally we developed, human values and human emotions should never be forgotten. Technology should be enjoyed but at the same time values and ethics should not be violated. The article has discussed critically about the development of the technology in the society, Evolution of Indian e-Education and its implementations of rural and urban, what are the advanced programs offering by government from school to higher education and acts which are currently using at present, strategies which are applying to make India digitalized. Moreover, identified some challenges to make India as 'Digital India'. Advanced technology extremely developing. it is accustoming by country people but how they are employing is important. The control over technology usage is uncertain. Rather than good purpose it is used for wrong purpose. Consequently, cyber-crimes are gradually increasing. Securing personal data is very problematic. Governments are showing interest to make 'Digital India' but what about the security. Now this is a most important problem that we are facing. Application of E-commerce is novel idea to make digital India but what about the security. Here two questions will raise first is what is needed in order to make EC payment for safe, another is which method is used. Integrity, authenticity, security and privacy requirements are needed to make impeccable Digital India.

Digital society is changing by advanced technologies day by day. Once upon a time, people thought of technology as a strange and incomprehensible thing, but now, from the moment we wake up in the morning to the moment we go to bed at night, everything has become digitalized. We live in a digital world. We have become accustomed to doing everything digitally, from our daily needs to our daily activities. A smart city is nothing but adoption of digital technologies, such as the Internet of things (IoT), 5G networks, artificial intelligence (AI), big data, cloud computing, autonomous vehicles and others, optimizing the efficiency of cities'. But it is very tough when there are serious insufficiencies arise in the provision of public services. These are the problems where urban development policies need to address; then only digital India program will be successful. Then only the smart city models can be a good solution to the nation. The design of a smart city must include high-speed communication networks, and the applications that provide smart data management to optimize processes and improve quality of life and sustainability.

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23. World Bank Issuing First Block Chain Bond Soon
