ILE MULTIDISCIPLINARY JOURNAL [IF SCORE – 7.58]

VOLUME 3 AND ISSUE 1 OF 2024

APIS – 3920 – 0007 | ISSN - 2583-7230

Published by

Institute of Legal Education

https://iledu.in

THE MECHANIZATION OF JUSTICE SYSTEM IN INDIAN JUDICIARY

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Best Citation - E.SINDHUVARSHINI & MONISHA D, THE MECHANIZATION OF JUSTICE SYSTEM IN INDIAN JUDICIARY, ILE MULTIDISCIPLINARY JOURNAL, 3 (1) of 2024, Pg. 01-08, APIS – 3920-0007 | ISSN - 2583-7230.

ABSTRACT :

The role of technology is to improve the standards of investigation and surveillance in the judiciary system. By Changing its advantages and handling its disadvantages. It's quickly developing, it is almost probable that this has an impact on criminal justice system functions because, it has become more open such as Virtual Courtrooms and Video Links, Real-Time Transcriptions, DNA, CCTV, and the Use of Facial Recognition Technology, Body Worn Video, Use of Algorithms and AI. The purpose of this research discovers the existing technologies which can be implemented in Indian Juridical. It does not insist that we should immediately replace the established traditions of practice but also update with time. Benefiting from this technological use, it should be used alongside the judiciary rather than in place of them, as it will ensure that there is no potential for any error or mistakes as the human interaction is no there to prevent this, and it should have be seen as a guideline for the judiciary to use rather than to just depend on. Meaning that although modern technology has improved the justice system's efficiency and transparency at the expense of various drawbacks and issues, these issues could be readily rectified in the future with the ongoing growth of technology and availability. Influencing technology with the admin-judicial process helps in managing time on justice delivery and space to procedures such as court fees, filing fees, and other associated transactions are paid electronically, the judiciary's departmental level can operate more efficiently. With an ODR system, proceedings are freely available and cannot be altered, improving transparency and privacy significantly. Today, most Advocates use technology way more, better to improve the profession which improves quality then it is not dubious that updates in technology in every space of the judiciary can peak the justice system too.

INTRODUCTION:

Information technology (IT) is the use of computers to create, manipulate, store, retrieve and exchange all kinds of data and information[1]. Information technology forms part of Information and Communication Technology (ICT). An information technology system (IT system) is generally an information system, a communications system, or, more specifically, a computer system—including all hardware, software, and peripheral equipment—operated by a limited group of IT users[2]. Although humans have been storing, retrieving, manipulating, and communicating information since the first writing systems were developed the term information technology in its modern sense first appeared in a 1958 article in Harvard Business Review. The authors Harold Leavitt and Thomas L. commented on the application of statistical and mathematical methods to decision-making, and higher-order thinking simulations through computer programs. The term is most commonly used as a synonym for

[1] Jesús Sánchez, Calculation of the Gravitational Constant *G* Using Electromagnetic Parameters, Scientific research, December 29, 2016, Daintith, J. (2009) A Dictionary of Physics. 6th Edition, Oxford University Press, Oxford, UK. - References - Scientific Research Publishing (scirp.org)

[2] Ragual Awati, A brief history of the evolution and growth of IT, TechTarget, 22 July 2021, www.techtarget.com/whatis/feature/A-brief-history-of-the-evolution-and-growth-of-IT

computers and computer networks, but it also includes other information distribution technologies such as television and telephones. Many products or services within an economy are associated with information technology, including computers, software, electronics, semiconductors, the Internet, communications equipment, and e-commerce. Based on the storage and processing technologies used, it is possible to distinguish four distinct phases of information technology development: pre-mechanical (3000 BC - 1450 AD), mechanical (1450 - 1840), electromechanical (1840 - 1940), and electronic (1940) up to right Now)3. One day, you wake up in the morning and check your phone. You are shocked to see that every bit of your data stored in different apps like your phone gallery, Facebook, Instagram and WhatsApp has been hacked. Then you check your laptop and notice that it has been hacked. What are you going to do? Are you going to sue this social media for not protecting your data or looking for the hacker? This is where the Information Technology Act 2000 comes into the picture. The 21st century witnessed a technological revolution that not only brought India but the entire world. The use of computers is not limited to existing institutions or organizations, but is available to every individual at the touch of a finger. But as technology evolves, so does the software. This forces businesses into updating their existing programs or sourcing costly alternatives which inevitably disrupt their commercial activities. Subsequently, providing new software to business means big profits, but it also creates the potential for exploitation. Again, this is where technology law steps in to ensure a fair but competitive marketplace which benefits all parties. It does so by regulating any issues relating to software installation, troubleshooting, and warranties.

TECHNOLOGY AND INDIAN JUDICIARY:

SUPACE: Supreme Court Portal for Assistance in Courts Efficiency Hon'ble Chief Justice of India, Justice Bobde unveiled their brainchild, The SUPACE i.e., Supreme Court Portal for Assistance in Courts Efficiency, at a conference held in virtual mode. It is a tool that is based on Artificial Technology and Machine Learning and helps the judges to collect the relevant facts and laws related to the case. The need for this technology was identified by the AI committee of the Supreme court as they figured a major job of the judge is to analyse the Judicial Precedents related to the case and its factual matrix. This particular tool helps the judge finding all of those related data and then further helps in handling the data as well[3]. While explaining the features of this toll they explained that:

- automate and extract facts from files,
- extract facts like date, time etc.,
- locate various questions with answers,
- help in indexing and bookmarking,

provide chat box to get automated suggestions, etc, the court felt that such a use of technology was extremely necessary as the legal teams which have to deal with the processing of a lot of data, will now have less amount of mundane work on their hands. While explaining this as 'a perfect blend of human intelligence and machine learning' Justice Bobde expressed that this tool can do wonders when paired with human intelligence and increase the productivity of the courts and reduce the caseload on the judges. With crores of cases pending with the Judiciary it becomes absolutely important to adopt these new technologies as they completely have the potential to clear out this backlog and also help people in getting justice faster. In there will be no compromise in this regard. The tool will only be used to help with mundane tasks and hence make the work more efficient[4].

[3] Lynda m. Applegate, Information Technology and Tomorrow's Manager, Harvad Business Review, November 1988, hbr.org/1988/11/information-technology-and-tomorrows-manager

[4] Kehl, Danielle Leah, Algorithms in the Criminal Justice System: Assessing the Use of Risk Assessments in Sentencing, Digital Access to Scholarship at Harvard, 2017, Algorithms in the Criminal Justice System: Assessing the Use of Risk Assessments in Sentencing (harvard.edu)

The tool has also been recommended to be used by the High courts, where some of the High Courts like the high court of Delhi and Bombay have already begun experimenting with this tool for use in criminal cases and examination of evidence. The Supreme Court of India has also been working on the idea of e-Courts for which a third draft proposal has been released by the Supreme Courts' e-Committee. e-Courts project is a concept based on the 'National Policy and Action Plan for Implementation of Information and Communication Technology (ICT) in the India Judiciary – 2005' submitted by e-Committee, Supreme Court of India. The judiciary have expressed interest in the potential for electronics filing to increase reduce costs and increase efficiency 18 and online alternative dispute resolution as a means to reduce costs to claimants increasing access to justice :19 Technological approaches are being used to provide guidance for sentencing and pretrial detention in some courts, including machine-learning based solutions which have been criticized for potential racial bias issues 10 Litigation outcome prediction tools have been introduced to the market by the big three legal research providers LexisNexis, Westlaw, and Bloomberg Law[5]. The Lex Machina estimates a judges' likelihood of granting or denying a motion. Litigation outcome prediction tools have been criticized for potentially harming access to justice, as would-be litigants with claims that are judged too novel or less viable may be denied legal representation.

LEGAL AND TECHNOLOGY:

On the surface, the notion of 'legal technology' and what may or may not fall under its auspices, seems straight forward. One might say that legal technology is simply any technology that one might use while engaged in legal activities. However, this definition has a number of weaknesses. It is of course self-referential, defining the term in relation to its component parts. It also elides much of the nuance and diversity that exist within the bounds of legal technology, while at the same time being over inclusive and possibly incorporating many mundane technologies that have no intrinsic 'regalness' about them. Because of the diversity of technologies that potentially fit within the 'legal tech' penumbra, scholars have struggled to produce a precise and concise definition of it. Webb defines legal technology as 'the use of digital information and communication technologies to automate all or part of the legal work process, to offer decision support to legal service producers, and to provide legal information and advice directly to clients/end users. Hoffmann-Reim offers a similar definition describing legal tech as 'the use of digital technologies to assist in identifying, interpreting and applying the law and, in some instances, also in creating it, Salmeron-Manzano focuses on legal tech as online services used by lawyers or those needing legal advice These are certainly helpful definitions, but they exclude many non-digital precursors of modern legal technologies. This is perhaps appropriate when discussing 21st century legal technologies but is unduly limiting when trying to understand the concept more generally, rather than focusing on precisely defining legal technologies, Gowder provides a helpful way to categorize them according to the type of effect they have on legal practice. This categorization scheme sorts legal technologies into two types: the 'cheaper lawyer' type which replicates current practices but with greater efficiency, and the 'transformative artificial legal cognition' type that facilitates automated legal decision-making in ways not previously possible. This focus on how different legal technologies have different implications for legal systems provides an essential consideration for related discussion. However, we are still left without a clear definition of what precisely we mean when we talk about 'legal tech'. In seeking a generally applicable and

[5] Christopher Thomas and Antonio Ponton-Núñez, Automating Judicial Discretion: How Algorithmic Risk Assessments in Pretrial Adjudications Violate Equal Protection Rights on the Basis of Race, Minnesota Journal of Law & Inequality, Automating Judicial Discretion: How Algorithmic Risk Assessments in Pretrial Adjudications Violate Equal Protection Rights on the Basis of Race - Minnesota Journal of Law & Inequality (lawandinequality.org)

historically inclusive definition, we can begin by deconstructing the term into its constituent parts—legal and technology. As technology moves from the generic towards the specific end of the spectrum, it becomes more likely to have functional implications on the legal system. By definition, these specifically legal technologies influence how we engage in legally related activities. It is therefore in their nature to alter the way legal systems function and they thus raise issues that are important to the legal profession. For instance, specific legal technologies are more likely to raise issues related to access to justice ,These technologies have the capacity to reduce the cost of legal services, thereby improving access to justice ,or alternately provide tools only available to those who can afford them, thereby making access to justice less equal ,Because of the functional implications that are in their nature, specifically legal technologies are more likely to raise professional ethics-related design considerations. Designers of specifically legal technologies must, therefore, take into consideration the effects their technologies may have for consumers of legal services[6]. Depending on their own interests, they may also wish to consider the effects on the legal profession more generally. After all, these functional implications are most likely to be relevant to those who make their living in a legal capacity.

ACCESS TO JUSTICE:

The federal government has provided funding for the delivery of legal services to poor persons throughout the United States since 1964. Those services, which have been administered by the Legal Services Corporation ("LSC") since 1974, are intended to increase the quantity and quality of legal services available to the poor. LSC estimates that no more than 20% of poor persons with civil legal needs are able to get assistance. But new technology may Ena- blew the provision of more and better legal assistance. Technology has revolutionized the delivery of services throughout the public and private sectors of the United States and the world. Can the use of modern technology increase the capability of the civil legal services commune- ty to meet the legal need of poor persons in this country, even if funding levels remain constant? In 1998, LSC conducted the first summit on the use of technology to improve access to justice. The attendees represented courts as well as legal services organizations. Over two days, the participants drew on a series of white papers prepared in advance of the summit to de-flop an ambitious plan that led to the creation of LSC's Technology Initiative Grant ("TIG") program in 2000 .When Congress authorized funding for TIG grants in 2000,13 the digital revolution had already brought about great changes in society[7], but a significant "digital divide" kept low-income people from access- Ing information available on the Internet .While the divide has not been eliminated, it has narrowed significantly in subsequent years. Today, 62% of low-income adults have access to the Internet, com-pared to 78% of all adults. The narrowing of the digital divide pre- sent an opportunity to examine past and present web-based legal services delivery strategies and to consider future online solutions that could significantly increase the provision of civil legal assistance to low-income people. Since 2000, access to legal resources and information specifically targeted to low-income people has grown tremendously. Every state now offers a state wide legal aid website, where legal services provide- errs collaborate with other access to justice organizations to provide a portal for self-help resources and a public entry point for intake and referrals to specific organizations that offer assistance. State wide legal aid websites are also used to coordinate pro bono attorneys and volunteers, provide training materials, and enable advocates to pry- lately

[6] David Freeman Engstrom, **Civil Justice at the Crossroads, Cambridge University Press: 02 February 2023,** www.cambridge.org/core/books/legal-tech-and-the-future-of-civil-justice/introduction/29F9CA42E026AD4495EEBDB539F297E9

[7] **Julian Webb,** Legal Technology: The Great Disruption? SSRN, July 31, 2020, Legal Technology: The Great Disruption? by Julian Webb :: SSRN

collaborate and share resources. As one leading designer of web-based access to justice programs observed:

" It is difficult to overestimate the importance of these state wide Web sites as foundational building blocks for transformational delivery changes. These sites provide the Internet framework on which to hang new services and new approaches to collaboration[8]. Their authenticity and interface consistency make these sites viable platforms for information and service delivery innovation across the country.

CONTRIVANCE OF LEGAL TECH :

While dealing with issues relating to the CoWIN portal, the Supreme Court recently highlighted some of the major impediments to vaccine delivery to the general public. Major impediments include low digital literacy across the country, low digital penetration, and serious bandwidth and connectivity issues, particularly in remote and inaccessible areas. Despite the policy's goal of bringing the benefits of vaccination to every human being in the country, it was falling short due to the inherent difficulties identified. The premise of the court's observations was that relying solely on digital transformation may not be a good idea. It may result in the exclusion of a large portion of the population. Efforts of the Judiciary During the Pandemic following the pandemic, courts began using facilities such as e-filing in earnest. In May 2020, the Supreme Court will also introduce a new e-filing system and artificial intelligence-enabled referencing. This was supposed to herald efficiency, transparency, and universal access to court delivery services for all users. The judiciary's effort is not a one-time event to address the pandemic-caused emergency. It also aims to use technology to overcome and resolve the intractable ills that have long plagued the judiciary. These include a massive backlog of cases and unacceptable levels of judicial vacancies at all levels across the country. The most recent Vision Document for Phase III of the e-Courts Project aims to address the judiciary's lack of digital access. It envisions a judicial infrastructure that is "natively digital," reflecting the impact of the pandemic on India's judicial timeline and thinking. Way Forward Frequent Performance Audits: Periodic performance audits and built-in security measures (isolated test environment) would be required to thoroughly understand and assess the potential risks. Each court requires a thorough cleaning, as well as awareness campaigns to all litigants in a premium, convenient, and efficient manner. Evidence-Based Rational Approach: Next step should be based on evidence-based rational thinking. For example, we must investigate and comprehend why video conferencing in criminal cases however has shortened nor significantly lowered the number of people awaiting trial. Address Inequitable Digital Access: While mobiles are widely owned and used, Internet access is still restricted to urban users. Filling Vacancies: Just as chatbots cannot replace doctors, no amount of technology, no matter how advanced, can replace judges, of which there is a significant shortage. According to the India Justice Report 2020, vacancies in the High Court are 38% (2018-19) and 22% in lower courts. As of August 2021, more than four out of every ten positions on the High Court were vacant. Infrastructure shortfall: The open court is a fundamental principle in the administration of justice. The issue of public access cannot be ignored; it must be prioritized. Too often, access to online hearings has been limited due to a lack of technical infrastructure. Perhaps now is the time to make long-term changes that will transform India's creaking justice delivery system. However, here technology is not a cure-all for all of the ills plaguing the courts and, if done carelessly, can be counterproductive.

AEGIS OF EFFICIENCY IN MECHANISATION

I have attempted to demonstrate that information technology is now a necessary tool for the modernization of a judiciary or judicial

[8] Esther Salmeron-Manzano, **Legaltech and Lawtech: Global Perspectives, Challenges, and Opportunities, DOAJ, 2015,** Legaltech and Lawtech: Global Perspectives, Challenges, and Opportunities – DOAJ

system. However, it is only a tool, and if not used with skill and commitment, it may stymie modernization efforts. The process of IT adoption is as important, if not more important, than simply purchasing and installing IT hardware and software. If the process is fallible, it is doubtful that the anticipated benefits will be realized from the IT purchased. It could quickly turn out to be a disposal of scarce resources if the equipment is left to gather dust as its life expires, as IT equipment has a limited life in terms of decrepitude. information technology creates both challenges and opportunities. Technology is changing the Legal Profession, what began in the 1960s with the introduction of networked computers and the Internet thanks to J.C.R. Lickliter's work on ARPANET, the legal technology industry has progressed a long way towards digitalization with the introduction of advanced software solutions and other related innovations. It has introduced several automated and highly efficient tools and platforms in a variety of areas.

Legal Research: Traditionally, legal research was time-consuming, error-prone, and exhausting, making it difficult for law firms to deal with complex issues, meet their client's needs, and make quick decisions. This has become much easier with the introduction of law firm technology research tools and platforms such as Casemaker, FindLaw, and Case Text.

Predictive Coding and E-Discovery: Predictive coding technology, also known as technology-assisted review (TAR), is used to determine efficient electronically stored information (ESI) documents. Predictive coding and eDiscovery tools powered by AI will continue to learn and make better decisions for a digital law firm, saving time and money.

Billing in Digital Form: Digital billing solutions assist legal organizations with a variety of administrative and secretarial processes within the system, such as calculating taxes, managing massive amounts of data, receiving customized billing, and accessing data from the cloud.

Management of Legal Documents: Legal document creation and management software such as Clio, Smokeball, and My Case have emerged to assist lawyers in creating, accessing, and managing documents as well as making sound business decisions.

Contract Management and Verification: These AI-powered digital legal and technology solutions help legal organizations verify and manage digital contracts quickly, efficiently, and without error. The legal industry has changed in the form of a timeline.

The legal economy revolves around client collaboration: The increased emphasis on client collaboration is the most important trend that will continue to reform the legal landscape. Law firm technology will improve professionals' connections with clients and foster a radical synergy among all stakeholders for greater transparency, efficiency, cost-effectiveness, and the best legal decisions.

Predictive Legal Analytics will grow in popularity: One of the key trends in the legal domain will be the shift from analytics to predictive analytics. This law firm technology will result in the development of innovative solutions that provide better strategic planning and other data-driven information. Both new-age legal tech start-ups and established law firms will use this to incorporate predictive analytics into their mobile applications and other services.

Increased use of virtual assistance and automation: Another trend that will persist in the legal industry is the increased use of virtual assistants and automation tools. This software and platforms would be used by both solo experts and small legal clinics to manage various tasks efficiently and expertly, such as intake and meeting scheduling.

The introduction of new legal solutions based on AI and Blockchain.: Many innovative solutions leveraging the power of AI and Blockchain in the legal industry will emerge and dominate the market in the coming years. These legal technology solutions will assist law

professionals in identifying better opportunities, developing new strategies, and determining the most effective ways to conduct business in a highly competitive and client-driven market.

Increased investment, products, and services in legal technology: The number of acquisitions, mergers, and fundings will increase as people become more aware of the benefits of introducing mobile apps and technology into the legal field. Not only investors, but established law firms will work with new startups to carve out a better market position. This will increase the number of legal technology professionals who will specialize in assisting law firms in integrating high-tech products into their current structure.

Modifications to the Hiring Process: Finally, there will be significant disruption in the job description this year and beyond. Legal tech startups and businesses will be looking for now-lawyers to make a direct difference in their operations.

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Changes to the Hiring Process: Finally, the job description will undergo significant change this year and beyond. Now-lawyers will be sought after by legal tech startups and businesses to make a direct impact on their operations.

The legal industry's challenges are Identifying and Taking Advantage of Technical Opportunities: To get the most out of legal software development, you must first understand why you need it. It is critical to understand the challenges you face with traditional business processes, the opportunities you are missing out on, and how legal technologies can expedite your growth and resolve your pain points. This can be determined by trying to discuss your business model with your team, conducting a thorough market and competitor analysis, and reflecting on your law firm's vision and mission. Choosing the Best Legal Software Development Firm, Though many technology solution providers have demonstrated the ability to create amazing software for law firms, not all are the best choice. This is because each legal project necessitates a unique set of skills and experience. When determining how to hire legal technology solution providers, consider their experience, team size, location, portfolio, tech stack, and other similar factors. It is always preferable to work with an experienced digital transformation solutions company that understands the aforementioned factors and can make the best decision.

CONCLUSION

In dealing with legal matters, technology has demonstrated its role in increasing efficiency, improving access, and encouraging visibility, accountability, and timeliness. The World Economic Forum 2018 highlighted the role of IT in various fields, including the legal profession, stating that 'computing has become much cheaper, and digital equipment and devices have become widely available, faster, and more cheaply available'. Data is the fuel that drives artificial intelligence and machine learning technologies. The World Economic Forum 2018 emphasized the importance of increased investment in AI, research, and cross-border collaboration. The judiciary's primary function is to hear and decide cases in a fair and timely manner at a reasonable cost. There are processes in place that lead to the resolution of the cases before the courts. These procedures must be effective, efficient, and equitable. The procedures must be effective as a result of providing good value for money. The resources used must be used in a non-wasteful manner, resulting in the most efficient availability and

distribution of the same. The system cannot be engaged in such an abstract search for truth while ignoring all other factors such as cost, efficacy, and equity. Given the scarcity of resources and increased priorities for the limited resource enclosure available, the modern approach wants to call for factor structure justice system objectives, particularly in resource-strapped societies such as our region. Second, the processes must be effective in the sense that they can achieve the desired results. Is the system, for example, capable of ensuring accountability for wrongs committed against society? Is the relief sought and obtained sufficient to compensate for the alleged injury? Going to court is not just an academic exercise, though the nature of the matter at hand may be somewhat scholarly in some cases, it is still necessary to address. The global pandemic served as a wake-up call for the entire world, including India, which had previously overlooked the benefits of information and communication technology (ICT). If we ever face another deadly pandemic like this one, we can be confident that the courts will not come to a halt, rendering justice undeliverable. Thus, in the future, information and communication technology (ICT) will aid in the management of the judicial system and the legal field as a whole. It will also be a significant evolving point for India's judicial system, playing a critical role in increasing public trust in the Indian judicial system. It may also attract more foreign direct investment as the investors become more confident. It may also inspire more direct foreign investment as investors realize that Indian courts have begun to function more efficiently.