



Transforming Arbitration for the Digital Age: Navigating New Opportunities and Overcoming Challenges

Dr. Swapna Bijayini

Assistant Professor, Capital Law College, Bhubaneswar, Odisha

Dr. Girish Ranjan Sahoo

Senior Assistant Professor, School of Law, Centurion University of Technology and Management
Bhubaneswar, Odisha

DOI : <https://doi.org/10.5281/zenodo.18230565>

ARTICLE DETAILS

Research Paper

Accepted: 23-12-2025

Published: 10-01-2026

Keywords:

Arbitration, dispute resolution, Artificial Intelligence, procedural fairness, awards enforceability.

ABSTRACT

The alternative of litigation is arbitration as an important alternative to the court system in resolving commercial disputes, which is faster and cheaper, as highlighted by Justice B.N. Agrawal of the Supreme Court in India. When arbitration is integrated with artificial intelligence (AI), it increases its efficiency, as it will make resolutions faster and lessen processing times and legal backlogs. Small firms and individuals benefit since AI increases precision by helping in document inspection, forecasting, and arbitrator choice. Nevertheless, there is a need to have powerful regulations that provide transparency, mitigate algorithm bias, and human control. The role of AI in predicting outcomes and resolving online conflicts will be also discussed in the paper, along with the consequences of its application in arbitration as a matter of arbitrators on the existing arbitration legislation.

Introduction

Technology is currently a significant aspect of our lives and it is evolving at a very high rate and is transforming the world in many aspects. On the one hand, new technologies have a number of advantages; however, they also have their own concerns due to their increased reliance. Two individuals may have a transaction or a business but end up in misunderstanding and conflicts. These problems



require timely and efficient solutions. Although one of the possibilities to resolve disputes is the litigation, other methods may be more effective. One such way is arbitration.

The dispute resolution mechanism is evolving rapidly in India, largely due to the influence of technology on the traditional dispute resolution practices. This change is important because it increases efficiency, accessibility and transparency in arbitration procedures. The future of dispute resolution in India is being influenced by technological advancement and revision of laws. The world of global trade has become more complicated and this is why arbitration is necessary in order to resolve disputes in a prompt, fair, and effective way. (Gopal, 2023)

Although the traditional arbitration processes have been associated with flexibility and confidentiality the processes have been faced with challenges such as time-consuming processes and enforcement of arbitral awards taking time. These problems have reduced the effectiveness and efficiency of arbitration as a way of dispute resolution. With the identification and the solutions of these deficiencies, the integration of AI technologies can transform the process of arbitration in India and make it smoother and more efficient and accessible to everyone involved.

While it is not a new concept, arbitration in India is something that is becoming increasingly popular.

The arbitration concept in India is developing to be dynamic as per the law. Equality before the law has been assured by the Constitution and based on the Indian judiciary is the fact that righteousness is rewarded by victory. Family conflicts used to be solved within the family by the elders, however, nowadays the confidence to this process has been lost, and many people prefer to find a solution in the court. Arbitration is flexible and party-autonomous. These principles can be improved by implementing an online dispute resolution (ODR) system at the agreement of both parties and developing a quicker resolution procedure.

Online Arbitration

Online arbitration is the form of arbitration that requires the utilization of electronic communications such as the initiation of a notice and the submission of documentary evidence. The method saves a lot of money, time, and is flexible with a high level of sustainability. It particularly applies to construction, oil and gas, and infrastructure disputes, where documentary evidence plays an important role. Online Dispute Resolution (ODR) is the modernization of the traditional Alternative Dispute Resolution (ADR) in that the resolving of the conflict without the physical presence is performed with the help of digital



technologies. ODR has become a complex procedure that incorporates high-technology tools such as artificial intelligence and machine learning to offer a flexible alternative to conventional courts.

ODR and its compliance with laws.

Online Dispute Resolution (ODR) is an emerging concept. ODR methods are under the support of the government and its advisors. In October 2021, NITI Aayog released an article titled Designing the Future of Dispute Resolution: The ODR Policy Plan to India. The recommendations made in this report were that the government should embrace policies that facilitate ODR. It is possible to make doing business easier and increase investments into the country with the help of these policies. They will however implement the recommendations of NITI Aayog gradually. This indicates that ODR has a great potential in India.

There is a huge adjustment made by the Indian legal system to embrace the changes in technological aspects of alternative dispute resolution (ADR). The online proceedings are especially provided in the recent amendments to the Arbitration and Conciliation Act. Also, Information Technology Act supports strongly the admissibility of digital evidence. Moreover, the Securities and Exchange Board of India (SEBI) has presented elaborate provisions regarding online dispute resolution in the capital markets, whereas the Reserve Bank of India (RBI) has also provided the framework of resolving fintech disputes and consumer protection. Such regulatory trends are also augmented with the changing data protection mandates that are aligned to new privacy standards.

Online mediation has been explicitly acknowledged by the Mediation Act 2023, but there is now no analogous provision of online arbitration. There are a number of laws that deal with online dispute resolution (ODR) and online arbitration. The A&C Act applies to arbitration process as stipulated in the Arbitration and Conciliation Act of 1996 and technical issues are covered by the Information Technology Act of 2000. In particular, section 4 and 5 of this act confirm the legitimacy of electronic records and signatures which imply that an agreement with an arbitration was signed online and is legally binding. In a case of Shakti Bhog Foods Ltd v., this was upheld by the Supreme Court. In Kola Shipping Ltd, the court acknowledged that there was a valid arbitration agreement that had been made by exchanging some emails. In the Kross Television India Pvt Ltd and Anr v. case, the Supreme Court claimed that the TV company was not entitled to provide any form of compensation. In the Kross Television India Pvt Ltd and Anr v. case, the Supreme Court asserted that the TV company could not give any kind of compensation. Vikhyat Chitra Production & Ors, believed that the intent of service is to inform the other party. Even in case of use of another way of service like email or even WhatsApp, and it is established



that the notice was sent and accepted, one cannot say that the other party was not given notice. Also, in the State of Maharashtra v. The Supreme Court accepted the video conferencing as a valid tool of capturing witness testimony and evidence (Praful Desai). Consequently, examination and cross examination of witnesses could now be done via video conferencing eliminating the need of having physical presence of witnesses.

Advantages of Technological Integration in the Arbitration.

The application of Artificial Intelligence (AI) to online arbitration can be viewed as the transformative prospects of promoting efficiency, accuracy, and accessibility of the dispute resolution process. Tools based on AI are gaining importance in the management of caseloads, arbitrator assistance, and simplification of tasks associated with the cases. This development is eventually beneficial to every stakeholder.

Digitization of the arbitration processes is an improvement of case management and minimization of delays. Online systems based on AI cover all the administrative work, such as document organisation and scheduling, so that professionals can focus on legal matters. Through automation of document review AI has the ability to process large amounts of documents quickly, reducing errors and enhancing accuracy. In addition, the electronic arbitrations also lower the amount of paper filing and manual entry of data, which guarantees safety and efficiency in ensuring records.

The blockchain technology makes the arbitration easier by allowing the creation of tamper proof documents, eliminating challenges on document authenticity. The use of digital arbitration regulations and AI-based decision-making tools contribute to predictability and transparency in particular cases like complex cross-jurisdictional cases. The technological developments accelerate the resolution process, enhance accessibility, reduce the cost, and increase procedural uniformity among various structures.

The cost saving of Online Dispute Resolution (ODR) is that its elimination of travel and hearing space requirements saves money what is spent directly and indirectly by a business that encounters delays in a conventional courtroom. This renders dispute resolution to be less expensive and convenient. Moreover, ODR is quicker in settling disputes because the involved parties oversee their cases online, which does not require a long wait to hear their cases in court and long paper trails. It comes in handy especially in cases of international conflicts or online purchases because it can easily fit in the hectic schedule.

AI technologies are crucial towards delivering arbitrators with data analytics and predictive information. In the arbitration industry, machine learning algorithms have been useful in the analysis of the past



arbitration cases, the applicable legal precedents, and the relevant legislation. This discussion assists the arbitrators in having a holistic view of the legal environment. With such a data-based method, arbitrators are able to make informed evidence-based decisions. As a result, better quality of arbitration decisions is achieved as there is less chance of making mistakes and this increases the general credibility of the process.

The arbitration procedure entails handling of large volumes of information and evidence. Arbitrators and legal professionals can easily workflows provided using AI tools that are excellent in arranging documents, indexing, and accessing them. This effective data management ensures the integrity of the process and helps in full finding of facts. Also, AI is able to process massive data to give possible results of conflicts based on their comparison of cases in the present with those in the past. This predictive ability is enabling parties to evaluate the risks, make reasonable decisions, and regard settlements to save on time and resources. AI-based document management systems also make the work process more efficient since it is possible to find the necessary information quickly.

Artificial intelligence (AI) software can also be used to provide real-time information on the progress of arbitration to increase transparency among the involved parties. Investors have an opportunity to follow the key milestones and understand the decision-making process, which promotes the increased openness and confidence in arbitration.

Arbitration is a new field of efficiency, justice, and access with the use of AI technologies. Such developments hasten the settlement procedures, minimize expenses, strengthen decision-making, and procedural integrity. With the emerging changes in technology, the use of AI in arbitration will most probably increase, and the process will become more acceptable to more audiences. But in relation to these advantages, modernisation issues also need to be taken into account that will be discussed in the following section.

Obstacles In Implementing Technology in Arbitration

Online dispute resolution platforms may not always guarantee adequate privacy to protect sensitive information. Without strong security measures, there is a risk that confidential details about your case could be exposed or misused.

Although digital arbitration offers many advantages, jurisdictional conflicts continue to pose a significant challenge. Legal systems vary widely across different regions, hindering the implementation of a standardised approach to online dispute resolution. Arbitration professionals must carefully navigate



complex regulatory frameworks to ensure compliance with both domestic courts and international arbitration bodies.

AI-driven arbitration systems handle a lot of sensitive information, including personal, financial, and legal data. It's vital to protect this data to keep trust in online arbitration processes. However, these AI systems can face cyber threats, and if a security breach happens, sensitive case information could be exposed. This could violate the privacy of the people involved and lead to misuse of their data. Additionally, making sure AI systems follow data protection laws, like India's Personal Data Protection Bill, is important but can be difficult because both AI technology and data regulations are constantly changing.

It has been difficult for AI to be accepted in arbitration since the legal industry has been sluggish to embrace new technologies. Some legal professionals are concerned that automation may replace some of their employment and question the validity of AI. Additionally, they worry about losing their jobs and the dwindling level of human knowledge in arbitration. This reluctance to embrace AI may hinder its application, particularly among senior arbitrators and attorneys who are unfamiliar with digital tools.

A comprehensive strategy is required to overcome these obstacles. This entails making infrastructural investments, putting robust data security measures in place, creating moral standards for AI usage, and educating legal professionals. A more effective and generally recognised AI-enabled arbitration environment in India may result from successfully resolving these problems.

Conclusion and suggestions

The primary step that should be considered worldwide is the enactment of a separate legislative framework for Online Dispute Resolution (ODR). It is essential to implement security measures in ODR without solely relying on IT principles, as these principles are typically designed for domestic purposes in each country. A distinct online arbitration procedure should be established. Furthermore, it is important to raise awareness among the public regarding the ODR mechanism as an effective tool for dispute resolution. For ODR to function properly and effectively, a robust infrastructure should be developed, supported by traditional arbitration principles. Additionally, there is a need for specialised institutions that can provide training, education, research, and policy development to ensure the success of ODR in India.

AI has great potential to transform dispute resolution. It can assist lawyers and parties in understanding the risks and possible arguments before a case goes to arbitration. However, there are drawbacks, such as



the requirement for substantial information for AI to produce accurate results. Online dispute resolution encompasses more than just online arbitration; it also helps to manage and resolve disputes effectively. Generally, assistive technologies significantly enhance arbitration processes, including tasks such as contract review, transcription, and translation. Finally, there is an ongoing debate about whether AI will replace humans in this field. In the context of arbitration, that seems unlikely. While AI can improve the efficiency and effectiveness of arbitration, it also faces various technical challenges.

References

- **Agrawal, B. N.** (2006). *Arbitration and the role of judiciary in India*. Supreme Court Cases (Journal), New Delhi.
- **Gopal, A.** (2023). *Technology and the future of arbitration in India*. Indian Journal of Arbitration Law, 12(2), 45–67.
- **NITI Aayog.** (2021). *Designing the Future of Dispute Resolution: The ODR Policy Plan for India*. Government of India, New Delhi.
- **Born, G. B.** (2021). *International Commercial Arbitration* (3rd ed.). Kluwer Law International, The Hague.
- **Schmitz, A. J., & Rule, C.** (2019). *Online Dispute Resolution for Smart Contracts*. Journal of Dispute Resolution, 2019(2), 103–136.
- **Susskind, R.** (2019). *Online Courts and the Future of Justice*. Oxford University Press, Oxford.
- **Arbitration and Conciliation Act, 1996** (as amended up to 2021). Government of India.
- **Information Technology Act, 2000**. Government of India.
- **Shakti Bhog Foods Ltd. v. Kola Shipping Ltd.**, (2009) 2 SCC 134 (Supreme Court of India).
- **Kross Television India Pvt. Ltd. & Anr. v. Vikhyat Chitra Production & Ors.**, (2017) 3 SCC 702 (Supreme Court of India).