

“FROM COURTROOM TO CYBERSPACE: THE USE OF TECHNOLOGY IN THE IMPLEMENTATION OF THE POCSO ACT”

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Abstract

The Protection of Children from Sexual Offences Act, 2012 (POCSO) changed India's approach to child sexual abuse by establishing a focused framework that acknowledged both traditional and tech-based forms of exploitation. Before POCSO, child protection was scattered, mainly depending on the Indian Penal Code, 1860, and the Immoral Traffic (Prevention) Act, 1956. Neither of these laws dealt with the complexities of crimes in the digital world. The rise of the internet, smartphones, and social media has made children more at risk for online grooming, trafficking, and sharing of child sexual abuse material (CSAM). At the same time, technology has also improved the fight against child abuse through awareness campaigns, confidential reporting systems, forensic analysis, digital evidence preservation, and child-friendly court procedures. This paper examines the link between technology and child protection under POCSO, looking at its role in prevention, reporting, investigation, trial, and rehabilitation. It also compares the legal frameworks before and after POCSO, reviews judicial interpretations, and discusses the connection between POCSO and the Information Technology Act, 2000. Lastly, the article highlights ongoing challenges such as privacy, extraterritorial jurisdiction, and the digital divide, while proposing ways to create a more resilient and child-focused digital legal environment.

Keywords: POCSO Act, Child Sexual Abuse, Technology and Law, Digital Evidence, Online Grooming, Child Pornography, Cybercrime, Forensic Investigation, Victim Protection, Information Technology Act.

I. Introduction

Childhood is a crucial stage in life that needs a safe and supportive environment. Sadly, children around the world, especially in India, still face risks of sexual exploitation. Child sexual abuse (CSA) is not a new issue; it has shifted from physical spaces to digital platforms as the internet and social media have grown. This change has created new ways for abuse to occur and complicated efforts to detect and prosecute it. In response, India enacted the Protection of Children from Sexual Offences Act, 2012 (POCSO), which offers a legal framework to protect children from various sexual offences.

The strength of POCSO lies in its acknowledgment of different types of abuse

and its openness to technology as both a challenge and a tool. Technology is essential to the implementation of POCSO, through digital reporting, forensic investigations, video testimony, and rehabilitation platforms. However, it has also added new legal challenges that require continuous adjustments in laws and judicial responses.

This paper seeks to analyze the role of technology in POCSO by referencing legal provisions, case law, government initiatives, and international practices. It compares the disjointed pre-POCSO system with the unified framework established by the Act, illustrating how technology has reshaped India's approach to protecting children.

II. Pre-POCSO Legal Framework: Limitations and Challenges

Before POCSO, India's strategy for handling CSA was inconsistent, depending mainly on general criminal laws. The Indian Penal Code, 1860 included provisions like Section 375 (rape), Section 354 (outraging modesty), and Section 377 (unnatural offences). However, these measures fell short. The definition of rape focused on gender and only included penile-vaginal penetration, overlooking non-penetrative forms of abuse. Male and transgender children received no protection under Section 375, highlighting a bias in criminal law.

The IPC also ignored crimes such as sexual harassment, voyeurism, stalking, and online grooming. The Immoral Traffic (Prevention) Act, 1956 criminalized trafficking, but it did not specifically address children as victims. The Information Technology Act, 2000 dealt with electronic crimes but mostly in the context of obscenity, punishing the transmission of obscene materials under Section 67. Amendments in 2008 added Section 67B to criminalize child pornography, but the scope remained limited.

Crucially, the criminal justice system lacked child-friendly procedures. Victims often had to testify in intimidating court settings, sometimes in front of the accused, without considering their emotional needs. The absence of technology in reporting, investigations, and trials meant many offences went unreported or unprosecuted.

Thus, before 2012, the lack of a dedicated, technology-aware framework made children particularly susceptible, especially as digital platforms expanded.

III. POCSO and the Technological Turn in Child Protection

The POCSO Act, 2012 marked a significant change by establishing a gender-neutral, child-focused law that recognized various sexual offences, including both penetrative and non-penetrative assault, sexual harassment, and

pornography. The Act acknowledges technology as a factor in both committing and preventing offences.

Sections 13 to 15 make it illegal to use children for pornographic purposes, while Section 33(7) keeps a child's identity confidential, a rule that applies to both digital and online contexts. Section 36 permits confidential court proceedings and video testimony, shielding children from further victimization. These laws show an understanding that technology is vital to maintaining child-friendly practices.

Beyond the statutes, both the government and judiciary have welcomed technology to put POCSO into action. Initiatives like the POCSO e-Box, launched by the National Commission for Protection of Child Rights (NCPCR), allow children to report abuse online anonymously. Childline 1098 has upgraded its services to include digital platforms, making it easier for victims to report incidents. The [cybercrime.gov.in](https://www.cybercrime.gov.in) portal lets victims or guardians file complaints regarding online CSAM. Forensic labs now utilize advanced tools to track digital evidence, recover deleted files, and analyze metadata in CSA cases.

In summary, POCSO does more than criminalize tech-related offences; it integrates technology throughout the processes of reporting, investigation, trial, and rehabilitation.

IV. Comparative Analysis: Before and After POCSO

A comparative analysis shows how POCSO fundamentally changed India's legal response to CSA by weaving technology into its structure.

Before POCSO, legal responses were inconsistent. The IPC did not address non-penetrative assaults, online grooming, or child pornography. Male and transgender children were left without legal safeguards. Reporting methods were limited to police stations, often discouraging victims from seeking help. Technology-based evidence was rarely used, and there were no child-friendly testimony options.

After POCSO, a unified statute was created that made a range of offences illegal and extended protection to all children, no matter their gender. Child pornography and digital offences were clearly addressed. Online reporting tools like the POCSO e-Box and cybercrime portals provided direct and confidential access to justice. Forensic technology, from CCTV footage to metadata analysis, became crucial in investigations. Court processes adopted video testimony and identity protection, while national digital campaigns focused on awareness and prevention.

This change illustrates a move from a system unable to confront digital challenges to one that actively leverages technology to protect children.

V. Role of Technology in Prevention and Awareness

Technology plays a key role in preventing CSA by facilitating large-scale awareness campaigns. Government, NGOs, and schools use digital platforms to share information on child rights and POCSO provisions. Social media initiatives, online safety lessons in schools, and child-focused apps help children learn how to recognize, resist, and report abuse.

For example, the Central Board of Secondary Education (CBSE), in partnership with NCPDR, has launched online awareness modules for teachers and students. NGOs employ interactive platforms and engaging learning tools to teach children about safe internet use. Such efforts would not be feasible without technology, particularly in a diverse country like India.

VI. Role of Technology in Reporting and Investigation

A significant benefit of technology is that it has enabled confidential and accessible reporting options. The POCSO e-Box allows children to submit complaints online without fear of retaliation. Childline 1098 has integrated SMS, email, and web communication to reach a wider audience. The Ministry of Home Affairs has

also introduced a specific online portal for reporting cybercrimes, especially involving CSAM.

When it comes to investigations, digital forensics has become critical. Police and forensic specialists now use specific tools to trace IP addresses, recover deleted files, and validate electronic evidence. CCTV footage, call records, and social media interactions often serve as evidence in CSA cases. Metadata analysis helps investigators confirm the timing and location of offences. These advancements ensure that technology-facilitated offences can also be addressed by technology.

VII. Technology in Judicial Proceedings and Child-Friendly Trials

The POCSO Act requires that trials occur in a child-friendly environment, and technology has played a vital role in achieving this goal. Courts increasingly use video conferencing for testimony, allowing children to avoid facing the accused in person. Confidential proceedings and digital sealing of sensitive documents help protect the dignity and privacy of victims.

Judicial advancements reflect a commitment to technology. In *State of Karnataka v. Puttaraja*, the Supreme Court emphasized the need to uphold the dignity of victims of sexual offences. Following POCSO, this principle has been reinforced through the use of video-link testimony and restrictions on revealing victim identities online. High Courts have instructed lower courts to conduct child statements in informal settings, often utilizing audio-visual tools.

VIII. Rehabilitation and Post-Trial Support through Technology

Rehabilitation for child victims requires ongoing psychological and social support. Technology has enabled the creation of online counseling platforms, hotlines, and telemedicine services. NGOs and state agencies now provide online therapy sessions, educational assistance, and reintegration programs. E-learning tools help

address educational gaps caused by trauma and legal processes.

Additionally, online tracking systems monitor case progress and victim well-being after trials. For example, some states have developed digital dashboards for real-time updates on POCSO cases, ensuring accountability and follow-up.

IX. Challenges in the Use of Technology under POCSO

Despite the benefits, technology has also created challenges. The digital divide means that children from rural or disadvantaged areas may not have access to online reporting systems. Concerns about privacy arise when sensitive digital data is mishandled. Jurisdictional issues complicate the prosecution of online offences that cross national borders and require international cooperation.

Moreover, over-reliance on digital evidence can occasionally delay trials, as forensic labs become overloaded. Balancing technological efficiency with child rights and privacy is an ongoing challenge for the future.

X. Conclusion and Suggestions

The POCSO Act, 2012 transformed India's legal reaction to CSA by establishing a comprehensive, child-focused framework that integrates technology into prevention, reporting, investigation, trial, and rehabilitation. From online reporting systems and forensic analysis to video testimony and digital counseling, technology serves as both protection and a weapon against child sexual offences.

However, challenges remain. To enhance technology's role, India should improve digital literacy, especially in rural regions, ensure strong data protection, and promote international collaboration on cross-border cybercrimes. Investing in forensic infrastructure and specialized training for law enforcement and the judiciary is also crucial.

Long-term success for POCSO will depend not only on legal frameworks but also on the

effective and ethical use of technology. Creating a child-sensitive digital landscape rooted in rights, privacy, and dignity should be the ultimate goal.

Footnotes

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