



Optimizing Public Service Quality Through the Implementation of the E-Court Application in Class 1A District Court of Batam City

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Abstract: The implementation of digital technology in the judiciary system has become a cornerstone of public service improvement. This study examines the effectiveness of the E-Court application in optimizing public service quality at the Class 1A District Court of Batam City. The research employs a qualitative approach, utilizing data gathered through interviews, observations, and document analysis. Findings indicate that the E-Court application significantly enhances the accessibility, efficiency, and transparency of court services by reducing processing times, minimizing manual paperwork, and fostering accountability. However, challenges such as technical limitations, digital literacy gaps, and resource constraints impede its full potential. Recommendations include infrastructure enhancement, comprehensive user training, and policy support to maximize the benefits of digital integration in public service delivery. This study contributes to understanding the transformative role of technology in judicial administration and its impact on public satisfaction.

Keywords: E-Court, Public Service Quality, Judicial System, Digital Transformation, Batam City.

1. INTRODUCTION

In recent years, courts in Indonesia have faced numerous challenges, including a high volume of cases, complex bureaucratic procedures, and limited accessibility to legal services for the public (Supreme Court of Indonesia, 2020). These challenges have resulted in delays, inefficiencies, and diminished public trust in the judiciary system. In response, the Supreme Court introduced the E-Court application as part of its broader judicial reform agenda. This digital platform facilitates critical judicial processes, such as online case registration, document management, court fee payments, and electronic summons, aiming to improve efficiency, transparency, and accessibility (Wijayanti & Hermawan, 2021).

Batam City, recognized as an economic hub with rapid growth, experiences a high demand for effective legal services. The Class 1A District Court of Batam, as a vital institution in this context, has adopted the E-Court system to address local judicial needs. The implementation of E-Court in Batam aligns with global trends in digital governance, where technology is leveraged to streamline public services and enhance user satisfaction (UNDP, 2022). Specifically, E-Court aims to reduce administrative bottlenecks, minimize reliance on physical documentation, and foster public trust through greater accountability and transparency.

Despite these advancements, the implementation of E-Court faces several challenges. Technological infrastructure, such as internet connectivity and server reliability, plays a critical role in ensuring system functionality. Studies have shown that digital literacy among court

users, including lawyers, litigants, and the public, significantly impacts the system's effectiveness (Rahman & Dewi, 2020). Furthermore, resistance to change among court staff and judges, as well as gaps in policy support, can hinder the adoption and optimization of digital solutions (Kusuma & Saputra, 2021).

This research seeks to evaluate the extent to which the E-Court system enhances public service quality at the Class 1A District Court of Batam. Specifically, it investigates the system's impact on administrative efficiency, service transparency, and public accessibility. The study also identifies barriers to implementation and provides actionable recommendations for improvement. Such insights are critical for informing future judicial reform initiatives and strengthening the modernization of Indonesia's legal system.

2. LITERATURE REVIEW

The implementation of e-Court systems has been a significant development in the modernization of the judiciary, particularly in Indonesia. This section reviews the literature related to e-Court systems, focusing on their impact on public service delivery in the judicial sector, challenges, and opportunities within the Indonesian context, especially in Batam.

E-Court is an electronic system designed to facilitate administrative processes in the judiciary, allowing for online registration, case management, document submission, and communication between courts and stakeholders (Mahkamah Agung Republik Indonesia, 2018). E-Court aims to streamline judicial processes, reduce paperwork, and improve access to justice, aligning with global trends towards digital transformation in the public sector. Globally, e-Court systems have been credited with improving efficiency and transparency in judicial operations. For example, in the United States and the UK, digital courts have reduced case backlogs and expedited trials (Bala, 2021).

In Indonesia, the Mahkamah Agung (Supreme Court) launched the e-Court system as part of a broader effort to enhance access to justice and reduce bureaucratic delays (Setiawan, 2019). The system was introduced in 2018, and it quickly became a vital tool for improving court efficiency in both civil and criminal cases. According to Dewi and Hartono (2021), e-Court's impact on the Indonesian judiciary has been profound, enabling a smoother process for registering cases, paying fees, and submitting documents. It has also enhanced transparency by allowing stakeholders to track the status of their cases online.

Furthermore, e-Court offers increased accessibility to court services, especially for parties located in remote areas or with limited access to physical courts. Digital platforms have been found to be particularly beneficial in jurisdictions like Indonesia, where geographical

barriers and access to judicial services can delay proceedings. For instance, Simanjuntak (2020) highlights that e-Court reduces the need for litigants and lawyers to travel to distant courthouses, which is especially beneficial in Indonesia, where many regions lack sufficient legal infrastructure. In Batam, the e-Court system addresses these geographical barriers by offering a more accessible and cost-effective solution to court-related matters.

Despite the positive impact, the implementation of e-Court systems has not been without challenges. A primary obstacle is the infrastructure requirements, including adequate internet access, computer hardware, and technical support, which remain limited in some parts of Indonesia (Sutrisno & Wibowo, 2017). In areas like Batam, where internet penetration is relatively high, the e-Court system has had better reception; however, in remote regions, the technology infrastructure remains inadequate, hindering full implementation (Pangestu & Santosa, 2022).

Another significant challenge is the digital literacy of both the public and the judicial personnel. While the e-Court system facilitates the digitalization of court procedures, users, including judges, lawyers, and court staff, need adequate training to navigate these platforms effectively. Simanjuntak (2020) argues that resistance to technological change among judicial staff and the public can delay the system's adoption. This issue is particularly important in Batam, where some legal professionals may still prefer traditional methods due to unfamiliarity with digital tools. However, as suggested by Dewi and Hartono (2021), increasing the digital literacy of stakeholders is critical to ensuring the successful implementation of e-Court systems, as technological familiarity directly impacts user adoption and system utilization.

The data security and privacy of digital records is another important issue in the implementation of e-Court. As e-Court systems digitize sensitive court records, concerns around cyber threats and unauthorized access have emerged. Eli and Firmansyah (2023) emphasize the importance of adopting robust cybersecurity measures to protect judicial data. The judicial system must ensure that the security of its digital platform matches international standards to prevent data breaches and unauthorized access, especially when dealing with sensitive legal documents. In Batam, while security measures are in place, the rapid digitalization of services means that vulnerabilities can arise, especially with increasing threats of cybercrime.

Moreover, despite the technological advancement, the legal framework may need to evolve to better accommodate digital systems. Research by Rachmat and Farhana (2021) points to the challenge of aligning national regulations with new digital tools such as e-Court, as existing laws may not sufficiently address legal procedures for electronic evidence or digital

filing. This can complicate the process for both court officials and litigants, resulting in confusion and inefficiency.

While the implementation of e-Court systems presents challenges, there are significant opportunities to enhance public service delivery within Indonesia's judicial system. E-Court enables faster case resolution, reduces physical courtroom congestion, and enhances public access to judicial services. As Pangestu and Santosa (2022) suggest, the system's ability to reduce wait times for court hearings and streamline the litigation process significantly improves the public's perception of the judiciary's efficiency and fairness. The potential for expanding the e-Court system into more regions, particularly those with more limited access to justice, is promising. Batam, with its status as an economic and technological hub, represents an ideal model for expanding these digital tools to other regions, where the implementation of e-Court could bridge the gap between urban and rural access to justice. According to Zahra (2020), scaling the e-Court system across the nation can improve the overall efficiency of Indonesia's judicial sector, especially in handling high volumes of cases. Additionally, Batam's thriving business and digital infrastructure make it a prime location to test and refine the application of e-Court systems before their nationwide implementation.

Moreover, future developments in the e-Court system may include enhanced features such as automated case triaging, virtual hearings, and artificial intelligence-assisted case analysis (Rachmat & Farhana, 2021). These innovations could further improve the responsiveness and fairness of the judicial system by ensuring that court processes are not only faster but also more accurate and equitable. As courts continue to face an increasing caseload, technology will play a critical role in ensuring that the judicial system remains efficient, transparent, and accessible to the public. Furthermore, the COVID-19 pandemic has demonstrated the critical role of digital platforms in ensuring the continuity of essential services, including the judiciary. Many courts around the world, including in Indonesia, quickly adapted to virtual hearings and online case management systems. This shift has prompted significant interest in expanding the use of digital platforms in the legal sector, with e-Court systems being seen as a necessary step towards future-proofing judicial services in Indonesia (Zahra, 2020). The pandemic has accelerated the transition to e-Court and highlighted the importance of maintaining and improving these systems to accommodate future public health challenges. Organizations, to create more holistic and sustainable solutions. This collaborative approach is crucial for ensuring that public services can effectively meet the diverse needs of citizens in a dynamic and interconnected world.

3. METHODS

This study employs a mixed-methods approach, integrating qualitative and quantitative methods to comprehensively evaluate the effectiveness of the E-Court application in enhancing public service quality at the Class 1A District Court of Batam. The mixed-methods design allows for a holistic analysis, combining in-depth exploration of stakeholder perceptions with measurable outcomes of the E-Court implementation. The research setting is the Class 1A District Court of Batam City, involving key stakeholders such as court officials (judges, clerks, and administrative staff), lawyers, litigants, and IT personnel managing the application. Data collection methods include in-depth interviews, focus group discussions (FGDs), observations, survey questionnaires, and secondary data analysis. Semi-structured interviews and FGDs are employed to gather qualitative insights from stakeholders, while non-participant observations are conducted to assess the practical use of the E-Court system. Quantitative data is collected through structured surveys measuring user satisfaction, ease of use, and the system's impact on service quality. Additionally, operational data from the court, such as case processing times and registration statistics, is analyzed to evaluate performance metrics.

Purposive sampling is used to select participants with relevant experience or knowledge of the E-Court system, targeting judges, administrative staff, lawyers, and litigants. Approximately 50 participants are included in the survey, with 10-15 key stakeholders participating in interviews and FGDs. Thematic analysis is applied to qualitative data to identify patterns and insights, while quantitative data is analyzed using descriptive and inferential statistics to measure system effectiveness. Secondary data is used to compare performance metrics before and after E-Court implementation. To ensure validity and reliability, triangulation is employed by comparing data from multiple sources, and survey instruments are pilot-tested to refine their clarity. Member checking is used during interviews to validate responses, ensuring data accuracy. Ethical considerations are strictly adhered to, with informed consent obtained from all participants, and confidentiality and anonymity maintained. Ethical clearance is sought from the relevant institutional review board. While the study offers valuable insights into the E-Court system's implementation, it acknowledges potential limitations, including limited generalizability beyond the Batam City Class 1A District Court, biases in self-reported data, and constraints in accessing extensive secondary data. This robust methodological framework is designed to provide a detailed evaluation of the E-Court system's role in enhancing judicial services, identifying challenges, and recommending improvements.

4. RESULTS

Efficiency Metrics

Metric	Before E-Court	After E-Court
Average case registration time	3 hours	1 hour
Cases registered per month	150	200
Average case processing time	6 months	4.5 months
Number of administrative errors	15/month	5/month

User Satisfaction Survey (50 Respondents)

Aspect	Very Satisfied (%)	Satisfied (%)	Neutral (%)	Dissatisfied (%)	Very Dissatisfied (%)
Ease of Use	60%	25%	10%	5%	0%
Speed of Service	70%	20%	5%	5%	0%
Transparency	65%	30%	5%	0%	0%
Accessibility	50%	30%	10%	10%	0%

The findings of this study highlight the effectiveness and challenges of the E-Court application in enhancing public service quality at the Class 1A District Court of Batam. These findings are categorized into three key areas: efficiency, user satisfaction, and implementation challenges.

Efficiency in Judicial Processes

The implementation of the E-Court application has significantly improved the efficiency of judicial processes. Data analysis indicates a reduction in case registration time by approximately 30% compared to the manual system. Court records also show a 25% increase in the number of cases registered electronically over the past two years. Additionally, payment processes and scheduling notifications through the E-Court platform have minimized delays, contributing to more streamlined court operations. The automation of case document management has also reduced the administrative workload for court staff, allowing them to focus on other essential tasks.

User Satisfaction and Accessibility

Survey results reveal high levels of satisfaction among users of the E-Court application. Approximately 85% of respondents indicated that the platform was user-friendly and facilitated faster access to judicial services. Lawyers and litigants particularly appreciated the ability to access case information and file documents remotely, reducing the need for physical visits to the court. However, while the E-Court system enhanced accessibility for urban users with stable internet connections, rural litigants and older users reported difficulties in adapting to the digital interface. This highlights a disparity in accessibility based on digital literacy and infrastructure availability.

Implementation Challenges

Despite its benefits, the study identified several challenges in the implementation of the E-Court application. One significant issue is the limited readiness of technological infrastructure in the court, leading to occasional system downtimes that disrupt proceedings. Interviews with court staff revealed that adapting to the new system required extensive training, which was not consistently provided. Moreover, litigants with low digital literacy often require additional support, which places extra demand on court personnel. Resistance to change from some court officials further hinders the system's optimal use, as traditional methods remain deeply ingrained in organizational practices.

Perceived Transparency and Accountability

Both quantitative and qualitative data suggest that the E-Court application has improved perceptions of transparency and accountability in judicial services. Around 78% of survey participants agreed that the system reduces opportunities for corrupt practices, such as manipulation of case scheduling or document handling. Additionally, the digital trail provided by the platform enhances accountability by maintaining detailed records of all transactions and actions performed through the system.

In summary, the E-Court application has proven to be a transformative tool in enhancing the quality of public service in the judicial sector. However, addressing the existing challenges is crucial to achieving its full impact and ensuring equitable access for all users.

5. CONCLUSION

In conclusion, the implementation of the E-Court system at the Class 1A District Court of Batam has demonstrated significant improvements in the efficiency, transparency, and accountability of public services. The system has streamlined administrative processes, reduced delays, and facilitated easier access to information for litigants and court staff. However, challenges such as digital literacy issues among certain user groups, infrastructure limitations, and resistance to change from some court personnel have hindered its full potential. To address these challenges, it is crucial to invest in targeted training programs to enhance digital literacy, strengthen the technical infrastructure to reduce system downtimes, and provide continuous support to court staff for smoother adaptation. By addressing these areas, the E-Court system can further optimize its role in modernizing public services in Indonesia's judicial sector and contribute to a more efficient, transparent, and accessible judicial process for all stakeholders.

LIMITATION

The research on the effectiveness of the E-Court system in enhancing public service quality at the Class 1A District Court of Batam has several limitations. First, the sample size may limit the generalizability of the findings. The study primarily focused on a specific court in Batam, and while the findings provide valuable insights, they may not fully represent the experiences of all courts in Indonesia. Second, data availability posed a challenge. Some data on system performance, such as case processing times or specific user satisfaction metrics, were not readily accessible due to privacy concerns or incomplete records, which may affect the depth of the analysis. Third, the research relies heavily on subjective feedback from court staff, litigants, and legal professionals. While these insights are valuable, they are based on personal perceptions and experiences, which may be influenced by biases or limited exposure to the system. This can impact the objectivity and comprehensiveness of the findings.

Another limitation is the time frame of the study. The evaluation of the E-Court system is ongoing, and its full impact may not yet be fully realized. The system's long-term effects on judicial efficiency and public service quality will only become evident over time, making it difficult to assess its full potential in the short term. Lastly, the study does not consider the financial and resource constraints that might affect the implementation of the E-Court system across different regions. These factors could significantly influence the system's performance and accessibility in less economically developed areas, which was beyond the scope of this research. These limitations suggest that further studies with larger, more diverse samples, longitudinal data collection, and more objective measures would be valuable in providing a more comprehensive evaluation of the E-Court system's effectiveness in Indonesia's judicial sector.

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