



Digital Attendance Systems as an Instrument for Enhancing Employee Disciplinary Behavior

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Abstract

This study examines the role of electronic attendance systems in improving employee discipline within public organizations. The research is motivated by the increasing need for transparent, accountable, and technology-based personnel management to support effective public service delivery. The study aims to analyze how electronic attendance contributes to discipline and to identify factors that hinder its optimal implementation. A quantitative approach with a survey method was employed, using questionnaires as the primary data collection instrument. The data were analyzed through descriptive and multiple regression techniques. The findings indicate that electronic attendance plays a significant role in enhancing employee discipline, particularly in terms of punctuality and compliance with working hours. The system also functions as a formal control mechanism, an information source, and a basis for strategic decision-making. However, its effectiveness remains limited due to several constraints, including inconsistent enforcement of sanctions, low employee compliance, and the lack of integration between attendance data and performance evaluation systems. In conclusion, while electronic attendance systems have the potential to improve discipline, their effectiveness depends on consistent policy implementation, strong leadership commitment, and adequate organizational support. Strengthening supervision, enforcing clear sanctions, and optimizing the use of attendance data are recommended to enhance overall employee performance.

Keywords: Electronic Attendance, Employee Discipline, Performance, Supervision, Public Sector.

Introduction

Development in the context of developing countries is a systematically designed process aimed at achieving transformation toward more advanced and modern conditions (Bengtsson et al., 2018). The success of such development is largely determined by the quality of government apparatus as implementers of public policies (Purnomo & Tsany, 2024). Public officials are therefore required to demonstrate professionalism, a strong work ethic, and adaptive capabilities in responding to increasingly complex public service demands (Hudson et al., 2019). In the era of bureaucratic reform, public expectations for service quality have risen significantly, placing local governments at the forefront of delivering effective

services (Lanin & Hermanto, 2019). Consequently, they are expected to uphold the principles of good governance, including transparency, accountability, effectiveness, and efficiency. One of the key factors in supporting the realization of good governance is employee discipline (Glennon et al., 2018).

Employee discipline constitutes a fundamental element in determining organizational performance within the public sector (Razzaq et al., 2019). A high level of discipline contributes to improved work effectiveness, whereas low discipline can hinder the achievement of organizational objectives. In practice, however, various disciplinary issues persist, such as tardiness, absenteeism, and discrepancies between official working hours and actual task execution (Ernest, 2021). With the advancement of information technology, governments have begun to implement electronic attendance systems as a means of enhancing employee discipline. This system is expected to provide more accurate, transparent, and objective attendance data compared to conventional manual methods. Nevertheless, its implementation has not always been optimal, as several challenges continue to emerge in practice (Nurdin et al., 2022).

Based on findings from the Kotabumi Subdistrict Office in North Lampung Regency, the electronic attendance system has been implemented but has not yet fully succeeded in significantly improving employee discipline. This condition is influenced by several factors, including the absence of strict sanctions, low employee compliance with working hours, and the underutilization of attendance data as a basis for performance evaluation. Furthermore, empirical observations indicate that some employees still fail to adhere to scheduled working times, do not perform tasks according to established schedules, and are subject to disciplinary assessments influenced more by personal relationships than by objective data. These conditions highlight a gap between policy design and its practical implementation.

Therefore, it is essential to conduct an in-depth analysis of the role of electronic attendance systems in improving employee discipline, as well as to identify the key factors hindering their effective implementation. This study is expected to contribute to the development of public sector human resource management, particularly in enhancing service quality through improved work discipline.

Literature Review

The Role of Electronic Attendance

Electronic attendance systems refer to digital-based mechanisms for recording employee presence, utilizing technologies such as fingerprint scanning, facial recognition, or application-based platforms (Syahidi et al., 2025). The

implementation of these systems aims to enhance the accuracy of attendance data while minimizing manipulation practices commonly associated with manual recording methods (Dacholfany et al., 2021). In the context of public organizations, electronic attendance systems also represent an integral component of e-government initiatives that promote transparency and accountability in employee performance (Barusman & Virgawenda, 2019). Beyond their primary function of recording attendance, electronic attendance systems serve as an important managerial control tool. The data generated enable organizational leaders to monitor employee attendance in real time and provide a reliable basis for decision-making related to performance evaluation and disciplinary measures. Consequently, these systems function as objective and measurable instruments for organizational supervision (Setyarto et al., 2025).

Furthermore, the adoption of electronic attendance systems contributes to the development of a more disciplined and professional work culture (Abdullah, 2024). Employees tend to comply more consistently with established working hours, as the system offers a high level of accuracy and is resistant to manipulation (Barusman & Habiburrahman, 2022). In addition, the use of such technology fosters greater individual responsibility regarding attendance and adherence to organizational time regulations (Lanz et al., 2024).

However, the effectiveness of electronic attendance systems largely depends on the consistency of policy implementation and organizational support (Jung et al., 2020). Without firm enforcement mechanisms and strong leadership commitment, these systems risk becoming merely administrative tools with limited impact on employee behavior. Therefore, the integration of technology, regulatory frameworks, and organizational culture is essential to optimize the role of electronic attendance systems (Guhr et al., 2019).

Employee Discipline

Employee discipline refers to an individual's attitude and behavior in complying with organizational rules and norms (Goedurov, 2020). It reflects the level of awareness and responsibility in performing duties, as well as adherence to working hours, procedures, and professional ethics. In public organizations, discipline serves as a crucial indicator in assessing the quality of employee performance and the effectiveness of organizational operations (Lanz et al., 2024). Employee discipline is influenced not only by internal factors, such as individual motivation and self-awareness, but also by external factors, including leadership, supervision systems, and organizational policies. A conducive work environment, combined with

exemplary leadership, can significantly enhance employee discipline. Conversely, weak supervision and unclear sanction mechanisms may lead to a decline in disciplinary standards (Jimmieson et al., 2021).

From a human resource management perspective, discipline is closely associated with work productivity. Disciplined employees tend to demonstrate higher performance levels, as they are better able to manage their time effectively and complete tasks in accordance with established targets. Therefore, organizations need to develop systems that consistently promote and sustain employee discipline over time (Rivaldo & Nabella, 2023).

Furthermore, the implementation of employee discipline requires a clear and consistent reward and punishment mechanism. Providing recognition for disciplined employees, alongside appropriate sanctions for violations, represents an essential strategy in shaping desired work behaviors. In this way, discipline evolves beyond a formal obligation and becomes an integral part of organizational culture that supports the achievement of institutional goals (Marlina et al., 2021).

Research Framework

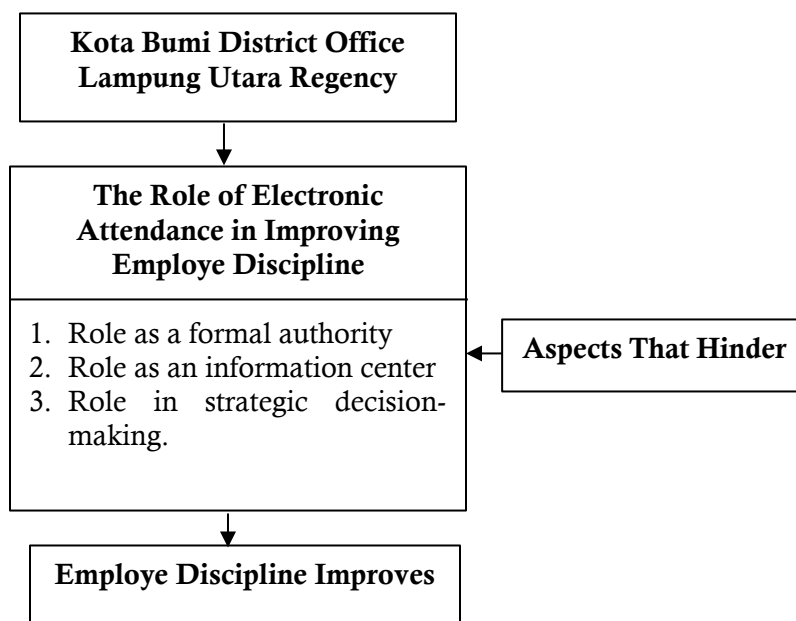


Figure 1. Resarch Framework

Method

This study adopts a qualitative approach to gain an in-depth understanding of the phenomenon through the perspectives of research participants within their natural context. This approach is selected because it enables the exploration of meanings, perceptions, and experiences in a holistic manner without manipulating variables. The research employs a descriptive design, aiming to systematically

describe the facts and characteristics of the object under investigation in order to provide a comprehensive understanding of the issues being examined (Lochmiller, 2021).

The study was conducted at the Kotabumi Sub-district Office in North Lampung Regency. Data sources consist of both primary and secondary data. Primary data were obtained directly from informants through in-depth interviews and field observations, with informants selected using a purposive sampling technique based on criteria relevant to the research objectives. A total of five informants participated in the study, including the Head of the Sub-district, the Sub-district Secretary, and three staff members. Meanwhile, secondary data were collected from supporting documents such as official reports, archives, books, scholarly journals, and relevant regulations to complement and strengthen the primary data.

Data collection techniques included in-depth interviews, observation, and documentation. The interviews were conducted in a semi-structured manner to elicit detailed insights into the informants' perspectives and experiences. Observations were carried out directly in the field to capture actual conditions, while documentation was used to gather relevant records, reports, and other supporting materials (Im et al., 2023).

Data processing and analysis were conducted interactively and continuously until data saturation was achieved. The analytical process involved data reduction, data display, and conclusion drawing. Data reduction was performed by simplifying and focusing the collected data, which were then presented in a descriptive narrative form to facilitate interpretation. Finally, conclusions were drawn based on identified patterns and relationships among the data. To ensure data validity, triangulation techniques were applied by comparing multiple sources and methods, thereby enhancing the credibility and trustworthiness of the findings (Caggiano & Weber, 2023).

Result And Discussion

The Role of Electronic Attendance in Improving Employee Discipline at the Kota Bumi Sub-District Office, North Lampung Regency

The primary objective of implementing an electronic attendance system is to promote compliance with organizational rules and work-related regulations. This system serves as a mechanism to monitor and ensure adherence to established attendance protocols among employees, thereby supporting greater discipline within the organization. According to Siswanto (2022: 21), the role of electronic attendance in enhancing employee discipline can be understood through several key dimensions,

including formal authority, its function as an information center, and its contribution to strategic decision-making. The findings of this study further elaborate on these dimensions:

Role in Formal Authority

The implementation of an electronic attendance system at the Kotabumi Subdistrict Office, North Lampung Regency, is a mandatory practice that refers to Government Regulation Number 53 of 2010 concerning Civil Servant Discipline. This regulation emphasizes that electronic attendance constitutes an integral component of the overall employee discipline system. Consequently, employee attendance is not merely an administrative routine but also a key indicator for assessing discipline and responsibility in the execution of official duties.

Within the organizational context, employee discipline plays a strategic role in ensuring the effective implementation of tasks in accordance with the functions and responsibilities of each work unit. All employees are required to record their daily attendance as part of performance evaluation, and the electronic attendance system facilitates greater accuracy, orderliness, and accountability. This system supports the achievement of organizational programs aligned with the institution's vision, mission, and objectives, as reflected in the operational practices of the Kotabumi Subdistrict Office, which emphasize punctuality and consistency.

Based on interview findings, the implementation of the electronic attendance system has been carried out effectively and in accordance with organizational duties and functions. Employees consistently record their attendance on a daily basis, except under specific circumstances such as official assignments outside the office. Moreover, the real-time nature of the system has significantly enhanced employee discipline, particularly in terms of punctuality, as it minimizes opportunities for attendance data manipulation.

This study employs a qualitative approach using in-depth interviews and document analysis to obtain a comprehensive understanding of the phenomenon. The findings indicate that organizations with strong rule-based and mission-oriented frameworks tend to demonstrate higher levels of effectiveness and discipline. In the bureaucratic context of the Kotabumi Subdistrict Office, discipline emerges as a primary indicator of employee performance, playing a crucial role in supporting the optimal achievement of organizational goals.

Role as an Information Center

The implementation of electronic attendance in improving employee discipline at the Kota Bumi Subdistrict Office, North Lampung Regency, has not yet functioned

optimally as an information center. Although the system serves a strategic role in monitoring attendance and punctuality, its implementation has not been effectively communicated to all employees. Furthermore, leadership has not consistently enforced sanctions or taken firm action against violations, resulting in suboptimal compliance that is often driven more by informal appeals than by formal regulations.

Based on interview findings, employees generally demonstrate a positive attitude and support toward the implementation of the electronic attendance system, and they perform their duties in accordance with their respective roles and responsibilities. Most employees comply with existing regulations; however, the optimization of the system remains constrained by external factors, such as out-of-area assignments that affect attendance recording. In addition, employees' understanding of policies, authority, and organizational commitment influences their attitudes toward implementing the system.

In practice, employees tend to make consistent efforts to use the electronic attendance system in accordance with leadership directives, as discipline is largely measured through attendance compliance. Nevertheless, limitations in facilities and infrastructure constitute a major barrier, preventing the system from functioning effectively as a reliable source of information on employee discipline. This indicates that the success of policy implementation depends not only on employee attitudes but also on adequate institutional support and organizational readiness.

Overall, the implementation of electronic attendance has not been fully effective in supporting the assessment of employee discipline. Key obstacles include limited awareness, inconsistent enforcement by leadership, and uneven understanding and application of the system. Therefore, clearer directives, continuous guidance, and improvements in infrastructure and supervision are required to ensure that the electronic attendance system can operate optimally in enhancing employee discipline and performance.

The Role of Strategic Decisions

The implementation of an electronic attendance system at the Kota Bumi Subdistrict Office, North Lampung Regency, plays a strategic role in enhancing employee discipline. This system serves as part of broader efforts to develop public personnel by promoting compliance with workplace regulations and improving employees' readiness to carry out their duties and responsibilities in accordance with established standards. Based on interviews with organizational leaders, the electronic attendance system has proven to be an effective management control tool that supports data-driven decision-making in human resource management.

Furthermore, the adoption of this system reflects the organization's commitment to improving public service quality through strengthened work discipline. Employees are required to adapt to the use of this technology, which also functions as a performance monitoring instrument for supervisors. Prior to its implementation, disciplinary oversight tended to be less effective; however, the introduction of the electronic system has enabled more accurate, transparent, and measurable monitoring processes, thereby contributing positively to improved work discipline.

In addition to its control function, the electronic attendance system contributes to enhancing organizational efficiency and effectiveness. It facilitates managerial supervision, evaluation, and the formulation of more appropriate policies. At the same time, the integration of this technology encourages improvements in employee motivation, knowledge, and skills, ultimately fostering professional work behavior that is oriented toward public service.

More broadly, the implementation of electronic attendance represents a component of human resource development that is adaptive to technological advancements. Employee discipline, as a key determinant of organizational success, can be strengthened through structured and technology-based systems. Therefore, electronic attendance functions not only as a tool for recording presence but also as a strategic instrument for enhancing professionalism, loyalty, and overall employee performance.

Aspects that Hinder the Role of Electronic Attendance in Improving Employee Discipline

The implementation of an electronic attendance system at the Kota Bumi Subdistrict Office in North Lampung Regency aims to enhance operational efficiency while strengthening employee discipline. However, the findings indicate that its implementation still faces several challenges that hinder its effectiveness. One of the primary issues is the low level of employee consistency in adhering to attendance punctuality, largely due to the perception that electronic attendance has not yet become a key indicator in performance evaluation. In addition, inconsistencies in work scheduling present another obstacle, as some employees fail to comply with established schedules, and field assignments often complicate monitoring processes and reduce performance accountability. Furthermore, the discipline assessment system has not been fully integrated with electronic attendance data, thereby weakening its role, as evaluations are still influenced by personal relationships between supervisors and employees. These conditions lead to overlapping roles and responsibilities, ultimately diminishing the effectiveness of the electronic attendance system in fostering a

disciplined work environment.

Conclusion

Based on the research findings, the implementation of the electronic attendance system at the Kotabumi Subdistrict Office, North Lampung Regency, has been established and has contributed to improving employee discipline. However, its effectiveness remains suboptimal due to the lack of firm sanctions, inconsistent employee attendance, and the absence of its use as an objective performance evaluation indicator. Therefore, continuous supervision and capacity building are required, alongside improvements in human resource quality and the enforcement of clear and consistent sanctions. These measures are essential to ensure that the electronic attendance system functions more effectively in supporting employee discipline and overall organizational performance.

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