

Analysis of the Utilization of the E-Sensi Attendance Application and the Work Environment in Building Employee Work Discipline at the NTB Provincial Cultural Park

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Abstract

This study examines the utilization of the E-Sensi attendance application and the role of the work environment in building employee work discipline at the NTB Provincial Cultural Park. Using a qualitative case study approach, data were collected through in-depth interviews with 13 employees, observation, and documentation, and analyzed using thematic analysis. The findings indicate that GPS- and photo-based E-Sensi effectively reduces attendance manipulation, although technical issues such as system errors and internet quota limitations persist. A supportive work environment strengthens discipline through positive social norms and interpersonal relationships. Employee discipline is shaped by the interaction of technological control, work environment conditions, and economic incentives from TPP. The study concludes that an integrated approach combining technology optimization, work environment improvement, and consistent sanction enforcement is more effective than partial interventions.

Keywords: *E-Sensi Attendance Application; Work Environment; Employee Work Discipline; GPS Technology; Cultural Park of NTB*

INTRODUCTION

Employee work discipline is a crucial element in determining the success of public sector organizations. Employees who have a high level of discipline will produce better service quality and encourage the achievement of organizational targets effectively. The NTB Provincial Cultural Park as an institution tasked with preserving and developing regional arts requires employees with consistent work discipline. The characteristics of cultural institutions that combine administrative functions with artistic activities create their own challenges in maintaining employee discipline (Zaenal Arifin & Sasana, 2022).

Digital transformation in the employee attendance management system has become a priority for the government to increase bureaucratic transparency and accountability. The E-Sensi application is a form of technological innovation that is applied to replace the conventional attendance system. The digital attendance system can increase employee discipline by up to 83.64% compared to the manual method. Mobile application-based attendance technology offers easier access and more accurate monitoring in recording employee attendance (Shelsabilla Regyna A, 2024).

The application of digital attendance technology has a significant impact on the efficiency of human resource management. Automated attendance management systems can reduce administrative workload, save time, and prevent attendance data manipulation. The cloud-based system allows managers to generate predictions of employee performance trends and workload optimization in real-time. The integration of this technology supports agility in workforce planning and improves the reliability of time and attendance records (Ukirde, 2024).

Employees' responses to the implementation of E-Sensi at the NTB Provincial Cultural Park show quite wide variations. Some employees experienced technical difficulties in the form of unstable internet connections and limited understanding of application features. The implementation of a GPS-based digital attendance system has a significant effect on employee attendance management, increasing operational efficiency, but also poses ethical challenges related to privacy. The success of technology

adoption depends not only on the sophistication of the system, but also on the readiness of the user to operate it (Salsabillah & Kurniawan R, 2024).

Employee digital literacy is a determining factor in the effectiveness of the use of electronic attendance systems. Biometric and IoT-based systems significantly reduce the administrative burden of HR departments through automation of time tracking, leave calculations, and report generation. Facial recognition terminals connected to cloud-based HR software enable real-time synchronization of employee data across departments. This transition not only improves data accuracy but also minimizes the need for repeated verification and follow-up communication (Ussher-Eke et al., 2025).

The work environment has a strategic role in shaping employee discipline behavior in public organizations. The work environment has a positive and significant effect on employee productivity with a determination coefficient value of 64.6%. Adequate work facilities, effective interpersonal communication, and strong leadership support can increase employees' commitment to organizational rules. Poor work environment conditions have the potential to cause stress and reduce employee motivation in complying with regulations (Ni Made Ari Kusuma Dewi et al., 2024).

The relationship between work discipline and the work environment shows a complex pattern in the context of Indonesian organizations. Work discipline and work environment together explain 82.1% of variations in employee performance. Research across various sectors shows that improving work discipline and improving the work environment simultaneously have a greater impact on performance compared to partial improvements. These findings indicate the importance of a holistic approach in human resource management in the public sector (Cindy Shelomita et al., 2023).

The dynamics of interaction between the E-Sensi digital attendance system and the reality of the work environment at the NTB Provincial Cultural Park create a multidimensional phenomenon of disciplinary behavior. Each employee brings different experiences, perceptions, and adaptive capacities in responding to technological changes and work environment conditions. The employee attendance system is the collection of attendance data that is part of reporting activities in an agency to help improve order and discipline in the work environment. This complexity requires a deep understanding of the factors that shape the manifestation of discipline in daily work practice (Santoso et al., 2024).

This study uses a qualitative approach to explore the authentic experiences of employees related to the use of the E-Sensi application and their perception of the work environment in the NTB Provincial Cultural Park. The qualitative approach allows researchers to capture the nuances of meaning, interaction dynamics, and subtle factors that shape employee disciplinary behavior. Through in-depth narrative exploration, this research is expected to make a theoretical and practical contribution to the development of strategies to improve employee work discipline in cultural institutions (Sari & Wijoyo, 2024).

Existing studies on digital attendance systems in public organizations predominantly emphasize technological effectiveness in enforcing employee discipline, while the role of the work environment is often overlooked. Consequently, how work environment conditions interact with digital attendance systems in shaping disciplinary behavior has not been sufficiently examined. This study offers novelty through a qualitative case study that integrates the E-Sensi attendance application and work environment conditions in building employee work discipline at the NTB Provincial Cultural Park.

METHODS

This study uses a qualitative approach with a case study design. The case study was chosen to understand in depth the phenomenon of employee work discipline in the real context of the NTB Provincial Cultural Park. The research location at the NTB Provincial Cultural Park, Jalan Majapahit No. 6, Mataram, was carried out from September to December 2025

The research informants were selected using the purposive sampling technique with the following criteria: employees who have used the E-Sensi application for at least 6 months, come from various levels of position, and are willing to provide information openly. The number of informants is 13 people which include structural, functional, and executive employees. This technique allows the researcher to select informants who have knowledge and experience relevant to the focus of the research (Dahal et al., 2024).

The data collection technique used in-depth interviews and observations. The interviews were conducted in a semi-structured manner with open-ended questions that discussed the experience of using E-Sensi, technical barriers, working environment conditions, and its impact on discipline. The duration

of the interview ranges from 10-15 minutes after getting the informant's approval. Observations were carried out to see firsthand attendance activities, employee work behavior, and physical conditions of the work environment. Documentation data in the form of attendance reports and related policies were also collected as supporting data.

Data analysis using thematic analysis follows stages. The first stage is to read the interview transcript repeatedly to understand the data thoroughly. The second stage is coding by labeling the pieces of data relevant to the research question. The third stage is to find themes by grouping codes that have similar patterns. The fourth stage reviews the theme to ensure consistency with the data. The fifth stage defines and names the final theme. The sixth stage is to prepare a research report by presenting themes accompanied by data citations as evidence (Cernasev & Axon, 2023).

The validity of the data is ensured through triangulation of sources by comparing data from various informants with different positions, and triangulation of methods by combining interviews, observations, and documentation. The researcher also conducted member checking by asking several informants to read the interview transcript to ensure the suitability of the interpretation. (Meydan & Akkaş, 2024)

RESULTS and DISCUSSION

Results

Utilization of the E-Sensi Attendance Application

Prior to the implementation of E-Sensi around 2022, the NTB Provincial Cultural Park used a manual attendance system with signatures on the attendance control sheet which had weaknesses in terms of accuracy, potential for data manipulation, and low supervision. The attendance data for 2020 (Figure 1) shows an unstable attendance pattern with significant fluctuations.

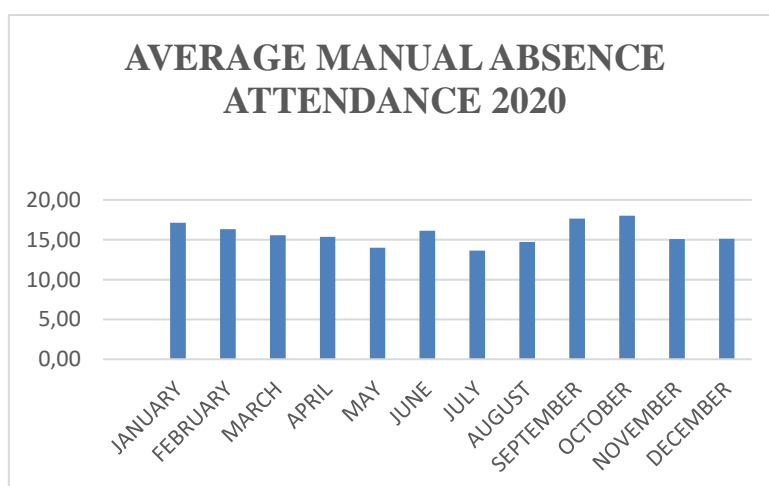


Figure 1. Employee Attendance Trends in 2020

Source: NTB Cultural Park Archives

The implementation of E-Sensi is considered positive by employees. The informant stated that this application “makes it easier for ASN to be absent and on time to do activities in the office” and “helps ASN employees to attend more quickly without waiting.” The main features of E-Sensi in the form of GPS technology and photo verification require employees to be physically present at the work site. The informant explained that “the system that was changed from the old to the new is good and can be said to be difficult to manipulate because it uses a location system.”

The anti-manipulation aspect is an important point in building work discipline. Unlike the old system that allowed employees to leave attendance to colleagues, E-Sensi requires physical presence. The informant stated: “we as employees must be more disciplined when absent no longer in the old way of being able to leave absenteeism to friends.”

Although it provides convenience, E-Sensi cannot be separated from technical obstacles. The problems identified include: “when you forget to be absent, you have to return to the office to be absent,” “quotas that are not always available,” and “essential absences are often errors.” The informant emphasized that the application “often errors when doing absences that make us unable to be absent.”

The impact of E-Sensi on work routines varies. Some informants said there were no significant changes because “everything went on time,” but others admitted that the system was “very influential” because it forced employees to be more disciplined and could no longer manipulate attendance data.

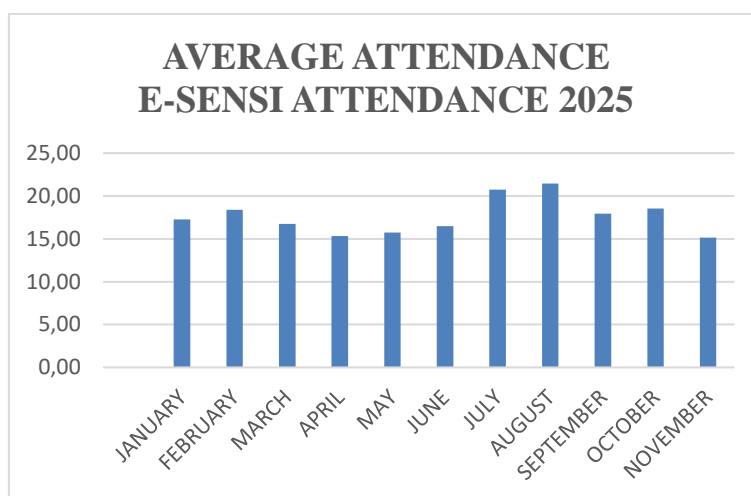


Figure 2. Employee Attendance Trends in 2025

Source: NTB Cultural Park Archives

Attendance data in 2025 (Figure 2) shows an increase in the consistency of employee attendance compared to the period before E-Sensi, indicating that the new system has succeeded in minimizing undisciplined practices such as leaving absences or arriving late without being recorded.

Working Environment Conditions

The work environment at the NTB Provincial Cultural Park is considered to be very supportive of employee productivity and comfort. The informant described: “The atmosphere in the cultural park is very comfortable to be able to make productivity without feeling like there is a burden, the yard is spacious and colleagues can have a casual chat with work that is not too stressful, the togetherness with each other is very close.”

Another statement corroborates this: “The working atmosphere at Taman Budaya is good and positive because we all support each other and complement each other. And we already know the character of each person in the Cultural Park so we know well each of the traits they have.” Recognition of the character of coworkers creates strong social bonds and facilitates collaboration.

The work facilities are considered very adequate. The informant mentioned “the supporting facilities are very adequate so that the work runs smoothly,” with a concrete example: “if the facilities are comfortable and we are supported to do our work in the form of paper printing machines, for example, we will be comfortable doing our work.”

Interpersonal relationships are an important element in creating a conducive atmosphere. The results of the interview showed that “the relationship between colleagues and superiors is very good because in the NTB cultural park environment, we always work together to help each other, as well as the superiors are very concerned about the staff.” This closeness and positive relationship are important social capital in the organization.

The comfort factor of the work environment was explained by the informant: “the work environment is comfortable because colleagues understand each other's duties where they always help each other even though it is not their duties.” A clear understanding of the main tasks and functions, accompanied by a willingness to help outside of their respective duties, shows a high level of solidarity. Another perspective states: “The work environment becomes comfortable when carrying out work is not too pressured by demands, for example if the work is given suddenly and must be completed quickly.”

The impact of the work environment on employee morale is very significant. The results of the interviews show that work spirit emerged “because our work environment is very comfortable, transparent and the motivation of the work team is always reminding in everything.” The informant

emphasized: “it is very influential because the work environment if the work environment is positive and not toxic, then the enthusiasm to come to the office and if it is the opposite if the work environment is not conducive and unproductive, then we will be lazy to work.”

Employee Work Discipline

The informant defines discipline as “the foundation of how to work smoothly and goals achieved” that creates a “consistent work rhythm” including on-time attendance and evaluation of each activity. In daily practice, employees practice discipline through “carrying out daily routines such as being absent, on time, completing tasks on time” and “reporting completed tasks to their superiors.”

The informant gave a comprehensive overview: “For example, when there are activities, when completing daily tasks, when following the morning apple, and when I go home I always carry out my responsibilities. I think that's my daily work discipline.” The fundamental view is also revealed: “Discipline is a strong foundation to make the Cultural Park better in the future if the content in the Cultural Park is disciplined by disciplined people, then all the things that are carried out will go well.”

The driving factors for discipline vary, ranging from practical things like “arrive on time and the workspace is always clean” to substantive motivation: “The economic factor I feel necessary and feel responsible, therefore I am disciplined to be able to carry out my work every day so that the TPP is not cut and it is a waste.”

The Employee Admission Allowance (TPP) is a strong economic incentive to maintain discipline. The informant stated that he was “always on time, because it is a pity that the TPP will be cut if it is late to make an absence.”

Regarding situations that can reduce discipline, the informant stated “there is none, because the system that binds us must be disciplined.” But a different perspective emerges: “When our friends are undisciplined, we feel jealous that they don't work optimally and we do a good job even though each action has consequences.”

The Relationship of E-Sensi, Work Environment, and Discipline

The results of the interviews showed a close relationship between the three variables. The informant confirmed: “I have always been on time, because it is a pity that the TPP will be cut if I am late to do my absence, it greatly affects discipline because we are always made on time and make us more active to work.”

The GPS-based system is a key factor: “The use of essential absences that use GPS that can only be absent in place makes my discipline increase because I have to be absent directly on the spot and cannot be manipulated by the data.”

The work environment plays an important role through the mechanism of social influence: “Because a disciplined work environment makes us more disciplined, also if the work environment is good and we are not good, then we will feel ashamed because those around us have carried out their responsibilities fully but we are not.”

The informant gave suggestions for improvement: “hopefully in the future we will be given quota allowances and no errors when using the application and hopefully in the future the work environment will be better, and support each other and the environment will be cleaner so that the mood at work will be more excited.”

Discussion

The Effectiveness of the E-Sensi Application in Building Work Discipline

The implementation of E-Sensi has a positive impact on the work discipline of employees at the NTB Provincial Cultural Park, in line with the view that work discipline is a person's awareness and willingness to obey organizational regulations and social norms. GPS technology in E-Sensi eliminates undisciplined practices such as absenteeism or data manipulation. explained that work discipline can be enforced through an effective supervision system and clear sanctions. E-Sensi provides an objective automatic monitoring mechanism with the threat of TPP cuts as a direct economic consequence. Arnisah & Siregar, (2022) Permana & Solehudin, (2023).

The effectiveness of technological systems in building discipline does not stand alone. emphasizing that changes in employee behavior are influenced by a combination of formal systems (regulations, technology) and contextual factors (culture, environment). Employee motivation to obey

is influenced by economic factors (TPP) and social norms in the work environment. Technical obstacles such as system errors and internet quota dependence indicate that the implementation of technology in HR management is not always smooth. emphasizing the importance of quality of systems and services to achieve user satisfaction and positive impact Ramirez, (2022), Mkhonto & Zuva, (2023).

Employees still appreciate this system because the benefits outweigh the obstacles faced, reflecting the concept of *perceived usefulness* of the Technology Acceptance Model. The implementation of E-Sensi not only changes the way employees are present, but also establishes a stronger culture of punctuality and accountability, in line with the view that changes in organizational practices can shape or change organizational culture Rubiyanti et al., (2023), Giannakos et al., (2024).

The Role of the Work Environment in Shaping Discipline

The work environment at the NTB Provincial Cultural Park is very conducive and has a positive effect on employee discipline. Define the work environment as a whole of tools, materials, the surrounding environment, work methods, and work arrangements both individually and in groups. The availability of adequate facilities creates comfort in working. stating a good physical work environment can improve employee performance and job satisfaction Lusiana Tulhusnah et al., (2020) Andreas et al., (2023).

Non-physical or social environmental aspects have a stronger influence. Relationships between employees who are familiar, supportive of each other, and understand each other's characters create strong social capital. Explaining social capital in the form of beliefs, norms, and social networks can increase organizational effectiveness. A positive social environment creates positive Rondi et al., (2021) *peer pressure* that encourages employees to behave in a disciplined manner.

Employees feel embarrassed if they are not disciplined when other colleagues have carried out their responsibilities well, in line with the theory of social norms that individuals tend to adapt their behavior to group norms to be socially accepted. A good relationship between employees and bosses creates an emotional commitment to the organization. Explaining that leaders who give individualized attention and support to subordinates can improve motivation and performance Wenzel & Woodyatt, (2025), Juliana et al., (2024).

Transparency in communication creates trust and openness that encourages positive employee behavior. Reasonable and less stressful workload in line with . which explains that when workload is managed well and employees feel supported, they will be more motivated and disciplined. A non-toxic work environment is a crucial factor. Showing that a toxic work environment can reduce job satisfaction, organizational commitment, and work discipline. Walter, (2024) "Theories about Job Demands and Resources," (2022), Thapa et al., (2022).

Interaction of Technology, Environment, and Discipline

Work discipline at the NTB Provincial Cultural Park is formed through the complex interaction between the E-Sensi technology system, the conditions of the work environment, and the individual motivation of employees, in line with the systemic approach in HR management. E-Sensi creates an objective external control mechanism, while a positive work environment creates internal control through social norms. mentioned that E-Sensi represents Huff & Schüssler, (2016) Janicijevic, (2022) *behavior control* that monitors employee attendance, while the culture of discipline represents *clan control* that is based on shared values and norms.

Economic motivation in the form of TPP shows that material incentives remain an important factor in encouraging discipline. Expectancy theory (Dahrani & Sohiron, 2024). explains that work motivation is influenced by individual expectations regarding the results that will be obtained from their efforts. However, economic motivation alone is not enough. Employees are also motivated by professional responsibility and a sense of not wanting to disappoint colleagues and superiors, in line with *the theory of self-determination* (Akhmaaj, 2024) that distinguishes extrinsic and intrinsic motivations.

This internalization process is facilitated by a positive work environment. Social Scheepers & Ellemers, (2019) *identity theory* explains that individuals define themselves based on group membership and tend to behave according to group norms to maintain a positive social identity. Employees who feel envious when their colleagues are undisciplined but do not seem to be sanctioned

express the importance of consistency in enforcing rules in Shi & Shaw, (2024) *equity theory*, employees compare their input (effort) and output (reward) ratios with others, and injustice can cause demotivation.

CONCLUSION

This study found **three main conclusions**.

First, the GPS-based E-Sensi application and photo verification effectively improve employee attendance discipline by eliminating data manipulation, although technical obstacles such as system errors and internet quota dependence require improvement.

Second, a conducive work environment that includes adequate facilities and positive interpersonal relationships strengthens disciplinary motivation through the mechanisms of social norms and positive pressure from colleagues.

Third, work discipline is formed through a synergistic interaction between E-Sensi technology control, social norms of the work environment, and the economic motivation of TPP incentives, which shows that a holistic approach is more effective than partial intervention.

The managerial implications of this study are: (1) The management of the Cultural Park needs to immediately improve the stability of the E-Sensi system and provide subsidies for employees' internet quotas to increase user satisfaction; (2) The consistency of enforcement of sanctions against disciplinary violations must be improved to maintain fairness and prevent the demotivation of disciplined employees; (3) Programs to strengthen organizational culture and maintain a positive work environment need to be institutionalized through periodic team building activities and an award mechanism for outstanding employees; (4) Leaders need to maintain transparency in communication and concern for employee welfare as the foundation of commitment.

The limitation of this study is that it focuses on one agency that limits the generalization of findings. Further research is recommended to: (1) Conduct a comparative study of the implementation of E-Sensi in various types of government agencies to identify best practices; (2) Using a quantitative approach to measure the relative influence of attendance technology and the work environment on employee discipline; (3) Explore moderator factors such as age, working period, and digital literacy that can affect the effectiveness of the digital attendance system.

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