

Research Article

## Analysis of the Implementation of Website-Based Digital Employee Attendance (HRGAIS) at PT David Roy Indonesia

Muqi Mathil Adllil Melsa<sup>1\*</sup>, Marsofiyati<sup>2</sup>, Maulana Amirul Adha<sup>3</sup>

<sup>1,2,3</sup> Administrasi Perkantoran Digital, Universitas, Negeri Jakarta: [mathilmuqy@gmail.com](mailto:mathilmuqy@gmail.com)

\* Corresponding Author: Muqi Mathil Adllil Melsa

**Abstract.** This study aims to examine the implementation of a website-based digital employee attendance system at PT David Roy Indonesia, including the obstacles encountered and efforts made to optimize its application. The study uses a qualitative descriptive method with a case study approach. Data collection techniques included interviews with five informants consisting of operational employees and Human Resources (HR) staff, observation, literature study, and documentation. The results of the study show that the implementation of a website-based digital attendance system at PT David Roy Indonesia has been carried out well and has facilitated employee attendance administration. The procedures for using the system are considered practical and easy to understand. Supporting factors for implementation include ease of access, automatic attendance recording, and support from HR. However, there are still several obstacles, such as technical disruptions at certain times, dependence on internet connection, and the process of employee adjustment to the new system. This study is expected to serve as material for the evaluation and development of digital attendance systems to be more effective and sustainable.

**Keywords:** Attendance Administration; Digital Presence; Human Resources; Information Systems; Website.

### 1. Introduction

The rapid development of information technology has brought major changes to various industrial sectors, including the distribution industry for consumer products such as beverages. Distribution companies are now required to utilize technology to improve operational efficiency, especially in human resource management. One form of technology utilization that is increasingly being implemented is website-based digital attendance, which is an online employee attendance recording system using web devices or online applications Susilo & Abdurrahman, (2023). This system replaces manual methods such as signatures or attendance cards, which are considered inefficient and prone to manipulation (Safitri, 2022).

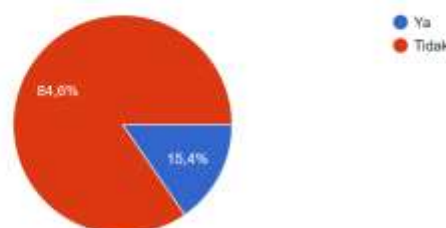
In this study, the researcher conducted preliminary research by distributing questionnaires to 13 employees at PT David Roy Indonesia. This preliminary research was used by the researcher to understand the website-based digital attendance system implemented at PT David Roy Indonesia. The results are shown in Figure 1:

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Apakah sistem HRGAIS berjalan dengan lancar selama masa uji coba (dari sisi login, kecepatan akses dan pengumpulan data)?  
13 jawaban



**Figure 1.** Results of Preliminary Research on the HRGAIS System in Operation.

Source: Data processed by the Researcher (2025).

Based on the preliminary research results, out of a total of 13 informants sampled, 84.6% responded “No” and 15.4% responded “Yes” when asked if they had difficulty using the HRGAIS system, indicating that the informants found it difficult to use the HRGAIS system during the trial period.

Efforts to optimize the implementation of digital attendance systems need to be continuously developed in order to provide convenience and comfort for all users. In addition, there needs to be regular evaluation of the effectiveness of the system so that technical and non-technical obstacles can be immediately identified and corrected. Thus, the digital attendance system can function optimally in supporting the efficiency and accuracy of attendance records within the organization. The results of the preliminary research are shown in Figure 2:



**Figure 2.** Preliminary Research Results Comparing Previous Attendance.

*Source: Data processed by the Researcher (2025).*

The preliminary research results show that out of a total of 13 informants sampled, 76.9% responded “No” and 23.1% responded “Yes” when asked about how attendance at PT David Roy Indonesia had changed. When asked whether the HRGAIS digital attendance system at PT David Roy Indonesia was effective compared to the previous attendance system, the results of this research show that the respondents' opinions in responding to this questionnaire were not favorable. From the results of this preliminary research, it can be concluded that the respondents' views on the questionnaire distributed online show a generally negative perception of the digital attendance system at PT David Roy Indonesia. Respondents assessed that the system was not yet functioning properly in supporting the employee attendance recording process.

The novelty of this study lies in its focus on analyzing the initial implementation of the new HRGAIS website-based digital attendance system, which has been in operation for three months at PT David Roy Indonesia. Previous research by Veren *et al.*, (2023) used a grounded research approach and focused on employees and lecturers at the Faculty of Mathematics and Natural Sciences, Tanjungpura University. Additionally, previous research by Adjhi *et al.*, (2023) used a quantitative method and focused on the Noor Faqih Usman Foundation. Based on the background of the problem discussed, the researcher wanted to conduct research related to digital attendance. With the existing problems, the researcher chose the research title “Analysis of the Implementation of Website-Based Digital Employee Attendance (HRGAIS) at PT David Roy Indonesia”.

## 2. Theory

### Information System

An information system is a collection of components that interact with each other to collect, process, store, and disseminate information in order to support decision-making and organizational operations Primadasa *et al.*, (2023) Research by Rahmawati *et al.*, (2024) highlights how the implementation of Management Information Systems (MIS) in higher education institutions can improve operational efficiency and student services.

### Digital Attendance

According Lorinda & Rizal, (2025) digital attendance is an advancement of manual attendance methods that aims to record employee arrival, break, and departure times more accurately, quickly, and with minimal manipulation. The technologies used vary, ranging from

fingerprint scanners, face recognition, cloud-based applications, to integration with mobile devices (Hidayat & Hafli, 2025)

### **Website-Based Digital Attendance System**

According Istiqomah *et al.*, (2024) a website-based digital attendance system is an attendance recording system that is accessed through a web browser and utilizes an internet connection. This type of system offers high flexibility because it can be run on various devices (computers, laptops, mobile phones) without the need to install a special application. A study by Nuraeni *et al.*, (2022) demonstrated the application of web-based attendance and QR codes in schools, proving that web and QR technologies can speed up the attendance process and reduce administrative burdens.

### **Barriers to the Implementation of Website-Based Digital Attendance**

#### 1) Limitations in Infrastructure and Network Connectivity

This is evidenced by research conducted by Sufandi *et al.*, (2023), who developed an Android web-based attendance application at the Pontianak State Polytechnic, and noted that connectivity and data protection challenges were important issues in the early stages of implementation.

#### 2) Attendance Validation / Authenticity

According Firdaus & Hidayat, (2025), who designed a web-based student attendance system with face recognition and SMS Gateway, they found that although the system could detect faces for validation, the need for SMS confirmation added complexity and could be a barrier to early adoption.

#### 3) User Resistance & Organizational Support

Organizational cultural barriers and user resistance to new systems can emerge as significant factors. Some employees or users may be unwilling or unprepared to transition to a digital system due to old habits or technical concerns. According Ervanza Devo Valerian, (2024), technical barriers and inadequate implementation can reduce the effectiveness of web-based systems.

#### 4) Technical Issues with Web-Based Systems

According Febriyanti *et al.*, (2024), web-based attendance applications sometimes experience functionality issues if not designed properly, such as slow response times for attendance data and user data access problems.

### **Efforts in Optimizing Website-Based Digital Presence**

#### 1) Improving System Stability and Network Infrastructure

According Sufandi *et al.*, (2023), improving server specifications and network quality can significantly reduce presence error rates, speed up system response times, and prevent disruptions such as login failures or timeouts.

#### 2) Optimizing Attendance Validation Features to Improve Data Accuracy

According Nuraeni *et al.*, (2022) proved that integrating QR Code features into digital attendance can increase the speed of the attendance process and reduce the risk of fraud. Meanwhile, according Firdaus & Hidayat, (2025) developed a face recognition and SMS gateway-based validation mechanism to improve user authentication in web attendance.

#### 3) Training, Assistance, and Improvement of User Digital Literacy

Optimizing digital attendance cannot be done solely by improving the system, but also by improving the ability of users to operate the system. Istiqomah *et al.*, (2024) explain that training and socialization play an important role in the successful implementation of website-based digital attendance.

## **3. Research Method**

This study uses a qualitative method with a descriptive approach. According Safarudin *et al.*, (2023) This study uses a qualitative approach with a descriptive qualitative literature review.

According to Sugiyono in Safarudin *et al.*, (2023), qualitative research is a research approach used to examine phenomena in their natural context, rather than in engineered conditions as in experimental research. In this approach, the researcher functions as the main tool that actively participates in collecting and analyzing data.

The reason researchers conducted this study using qualitative research methods and a descriptive or case study approach was that they wanted to learn more about the implementation of digital presence at PT David Roy Indonesia, such as data collection through observation, preliminary research, interviews, and documentation.

In the data collection process, the researchers used primary data obtained directly from relevant informants, as well as secondary data collected from various other supporting sources, namely:

- 1) Primary Data According Sulung & Muspawi, (2024) Primary data is data collected directly by researchers for their own research purposes.
- 2) Secondary Data According Sulung & Muspawi, (2024) Secondary data is data collected through indirect sources, either from the media or intermediaries.

The research conducted at PT David Roy Indonesia applied the purposive sampling technique as the sample selection method. According Sofatur & Aguspriyani, (2023) the main objective of the sampling process is to obtain a description that represents the characteristics of the observation units in the sample, so that the results can be used to draw conclusions and assess the characteristics of the population as a whole.

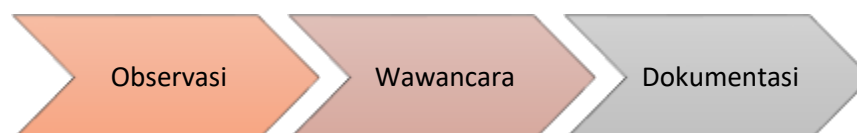
Based on this theory, the researchers selected five informants who were relevant to the topic of digital presence because they were able to provide important information for the study. The basis for selecting the informants is presented in the following table:

**Table 1.** Qualitative Sample Size.

Rules of thumb for Qualitative sampel size	
Basic Study Type	Rule of Thumb
Entnography	30-50 interviews
<b>Case Study</b>	<b>At least one, but can be more</b>
Phenomenology	Six participants
Grounded Theory	30-50 interviews
Focus Groups	Seven to ten per group or more groups per each strata of interest

*Source: (Njie & Asimiran, 2014).*

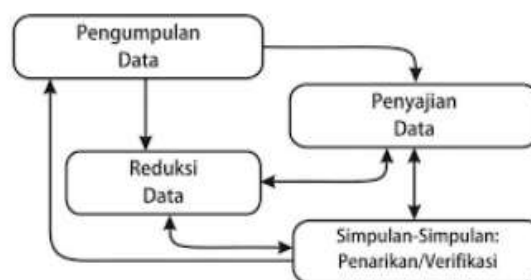
In the research at PT David Roy Indonesia, researchers applied data collection techniques with the aim of obtaining accurate information for this study, namely:



**Figure 3.** Sketch of Triangulation Data Collection Technique.

*Source: Data processed by the Researcher (2025).*

This process is carried out interactively as per the Miles and Huberman model, through the stages of data collection, reduction, presentation, and conclusion drawing, which are repeated and interrelated Sofwatillah *et al.*, (2024). The following are the stages of data analysis carried out by researchers:



**Figure 4.** Data Analysis Components.

*Source: Data processed by the Researcher (2025).*

#### 4. Results and Discussion

This study uses a qualitative approach with the aim of identifying the implementation of digital attendance. The participants involved in this study were five people, consisting of one operational employee and four Human Resource (HR) staff. Participants were selected based on the consideration that they had an understanding and real experience in the routine use of digital attendance systems in company operations.

**Table 2.** Participant Data.

No.	Partisipan	Jenis Kelamin	Lama Kerja	Unit
1.	Partisipan A	P	20 tahun	Human Resource
2.	Partisipan B	P	7 tahun	Human Resource
3.	Partisipan C	L	2 tahun	Human Resource
4.	Partisipan D	P	2 tahun	Human Resource
5.	Partisipan E	P	25 tahun	Sales Support

*Source: Data processed by the Researcher (2025).*

To gain an in-depth understanding of digital presence, researchers used observation, structured interviews, and documentation methods. Interview questions were compiled based on previous research indicators covering digital presence, human resources, and website-based attendance systems.

#### Procedures for Using the Website-Based Digital Employee Attendance System

The implementation of a website-based digital attendance system at PT David Roy Indonesia is in line with the latest trends in information technology for managing employee attendance in various organizations. Empirical research shows that online and digital attendance systems can improve the efficiency of attendance recording and support transparency of attendance data (Nuris & Umi, 2024).



**Figure 5.** Login Screen on the Attendance System (HRGAIS).

*Source: Data processed by the Researcher (2025).*

#### Supporting Factors in the Implementation of Website-Based Digital Employee Attendance

The implementation of a website-based digital attendance system at PT David Roy Indonesia, according to the findings in this study, is supported by a number of factors that are also found in the literature related to digital attendance. According Purwanto *et al.*, (2024), these supporting factors include:

- Efficiency and Accuracy of Attendance Recording
- Ease of Access and Real-time Monitoring
- Transparency and Accountability of Attendance Data
- Increased Efficiency of HR Administration and Operational Costs
- Ease of User Adaptation / User-Friendly System
- Improved Work Discipline and Professionalism (Potential)

**Figure 6.** Login Screen on the System (HRGAIS).

*Source: Data processed by the Researcher (2025).*

### Challenges and Efforts Made to Optimize the Implementation of Website-Based Digital Employee Attendance

Although the implementation of website-based digital attendance at PT David Roy Indonesia has provided various conveniences and improved the effectiveness of attendance administration, the implementation process has not been without a number of obstacles. These challenges have the potential to disrupt the smooth running of digital attendance and reduce the accuracy and reliability of attendance data. Therefore, the company continues to make improvements and adjustments to ensure that the system functions optimally and is well received by all employees (Fachmi *et al.*, 2025).

**Figure 7.** Display for Accessing Attendance Photos.

*Source: Data processed by the Researcher (2025).*



## 5. Conclusion and Recommendations

Based on the results of research and discussion regarding the analysis of the implementation of digital employee attendance at PT David Roy Indonesia, it can be concluded that the implementation of a website-based digital attendance system has been carried out well at PT David Roy Indonesia and has become part of employee attendance administration. The digital attendance system provides several supporting factors, including increased efficiency in attendance management, transparency of attendance data, accuracy of time recording, as well as easy access for employees and HR to conduct real-time monitoring. However, digital attendance still faces a number of obstacles, such as internet network disruptions, inaccurate location coordinates, technical system barriers, and the digital literacy of some users. The company has made improvements by providing technical support, socialization, and procedural adjustments to overcome these obstacles.

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