The Effect of Digital HR Practices on Employee Engagement of Employees at PT Permodalan Nasional Madani Medan

Navy Septiya Ningrum, Mesra B, Kiki Farida Ferine

Abstract

This study aims to analyze the effect of Digital HR Practices on Employee Engagement among employees at PT Permodalan Nasional Madani Medan. The research used a quantitative approach with an associative research design. Data were collected through questionnaires distributed to 50 employees as respondents. The sampling technique applied in this study was purposive sampling. The data analysis technique used was simple linear regression analysis with the assistance of Jamovi software. The results of the study indicated that Digital HR Practices have a positive and significant effect on Employee Engagement. The regression analysis showed a significance value of 0.000, which is lower than 0.05, indicating that the proposed hypothesis was accepted. The coefficient of determination (R^2) result showed that Digital HR Practices contributed 59.6% to Employee Engagement, while the remaining 40.4% was influenced by other variables not examined in this study.

The findings suggest that the implementation of digital-based human resource management systems, such as e-recruitment, digital performance management, online training, and employee self-service systems, can improve employees' emotional attachment, dedication, and involvement toward the organization. Therefore, organizations are encouraged to optimize Digital HR Practices to enhance employee engagement and organizational effectiveness.

Keywords: Digital HR Practices, Employee Engagement, Human Resource Management, Jamovi, Organizational Performance.

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Introduction

The development of digital technology has significantly changed the way organizations manage their human resources. In the modern business environment, companies are required to implement technology-based systems to improve organizational effectiveness and employee productivity. One of the important transformations in human resource management is the implementation of Digital HR Practices, which include the use of digital systems in recruitment, performance management, employee training, and communication processes. Digital transformation in human resource management is considered capable of increasing work flexibility, accelerating decision-making, and improving employee work experiences within organizations (Strohmeier, 2020).

Employee engagement has become one of the main factors determining organizational success in maintaining employee performance and productivity. Employees with high engagement tend to demonstrate enthusiasm, dedication, and strong commitment to their work and organization. In addition, engaged employees are more likely to contribute positively to organizational goals and show better work performance. Therefore, organizations need to create systems and work environments capable of improving employee engagement levels (Saks, 2022).

The implementation of Digital HR Practices is believed to positively influence employee engagement because technology-based systems provide convenience, transparency, and flexibility in work activities. Digital systems also facilitate employees in accessing information, participating in training, and managing their performance effectively. Employees who feel supported by modern digital systems tend to have stronger emotional attachment and involvement toward the organization. Previous studies have shown that the utilization of information technology and digital systems can improve employee performance and work effectiveness within organizations (B. Mesra, 2023).

In addition, digital transformation in human resource management has become increasingly relevant in organizations facing dynamic and competitive business environments. Organizations that successfully implement Digital HR Practices are considered more capable of creating positive employee experiences and improving employee satisfaction and engagement. Digitalization also enables organizations to optimize communication and collaboration among employees, thereby supporting organizational effectiveness and sustainability (Bondarouk & Brewster, 2021).

PT Permodalan Nasional Madani Medan is one of the organizations that continues to improve the quality of human resource management through the implementation of technologybased systems. As a company operating in the financial services sector, the organization is required to adapt to technological developments and improve employee work effectiveness. Therefore, the implementation of Digital HR Practices is expected to enhance employee engagement and support employees in achieving organizational goals effectively.

Several previous studies have examined the relationship between digital systems and employee behavior. Research conducted by Pranoto and Mesra (2024) showed that organizational systems and management practices significantly affect employee performance through psychological factors. Furthermore, studies conducted by Fadillah and Mesra (2023) explained that organizational support and management systems could improve employee performance and motivation. However, studies specifically discussing the influence of Digital HR Practices on employee engagement are still relatively limited, particularly in the context of Indonesian organizations.

Based on the explanation above, this study aims to analyze the effect of Digital HR Practices on Employee Engagement of employees at PT Permodalan Nasional Madani Medan. This research is expected to contribute theoretically to the development of human resource management studies and practically provide recommendations for organizations in improving employee engagement through digital-based human resource management systems.

Literature Review

A. Digital HR Practices

Digital HR Practices refer to the implementation of digital technology in human resource management activities to improve efficiency, effectiveness, and organizational performance. The use of digital systems in recruitment, employee performance evaluation, training, communication, and administrative management has become increasingly important in modern organizations. According to Strohmeier (2020), Digital HR Practices help organizations create flexible, transparent, and technology-based work systems capable of improving organizational competitiveness.

The application of digital systems in human resource management also provides convenience for employees in accessing organizational information and services. Employees can participate in online training, monitor performance evaluations, and access HR services independently through digital platforms. This condition contributes to improving employee experiences and organizational effectiveness (Bondarouk & Brewster, 2021).

Furthermore, Digital HR Practices are considered capable of improving work flexibility and communication effectiveness within organizations. Technology-based HR systems support faster coordination, easier access to information, and more effective collaboration among employees. Previous research explained that the use of information technology and organizational systems can improve employee effectiveness and support organizational performance improvement (B. Mesra, 2023).

The dimensions of Digital HR Practices in this study include e-recruitment, eperformance management, e-learning and development, HR analytics, and employee selfservice systems.

B. Employee Engagement

Employee engagement is a psychological condition that reflects employees' emotional attachment, enthusiasm, and dedication toward their work and organization. Employees with high engagement levels generally demonstrate greater motivation, stronger commitment, and better work performance. According to Schaufeli et al. (2002), employee engagement is characterized by vigor, dedication, and absorption in work activities.

Employee engagement is one of the most important factors affecting organizational effectiveness because engaged employees tend to contribute positively to organizational goals. Organizations with high employee engagement levels are also considered more capable of maintaining productivity and reducing employee turnover (Saks, 2022).

Several studies have shown that organizational support and positive work experiences significantly influence employee engagement. Employees who feel supported by organizational systems and management practices tend to develop stronger emotional attachment to the organization. In addition, modern and technology-based work systems can improve employee comfort and flexibility, thereby increasing engagement levels (Albrecht et al., 2021).

Research conducted by Pranoto and Mesra (2024) explained that organizational systems and motivational factors significantly influence employee performance and employee behavior. Furthermore, Fadillah and Mesra (2023) found that organizational support and leadership practices positively affect employee involvement and work commitment.

C. Relationship Between Digital HR Practices and Employee Engagement

Digital HR Practices and employee engagement have a close relationship in modern organizations. The implementation of digital systems in human resource management creates convenience, transparency, and flexibility for employees in carrying out work activities. Employees who perceive organizational systems as supportive and efficient tend to feel more comfortable and motivated at work.

According to Social Exchange Theory, employees who receive organizational support through effective systems and positive work experiences will respond by showing higher levels of engagement and commitment to the organization. Digital HR systems such as online training, digital performance evaluation, and self-service HR platforms can strengthen employees'

emotional attachment because they provide convenience and improve work experiences (Saks, 2022).

Several previous studies have shown that Digital HR Practices positively influence employee engagement. Bondarouk and Brewster (2021) explained that digital transformation in HR management improves employee experiences and strengthens employee attachment to organizations. In addition, research conducted by Meijerink et al. (2021) found that digital HR systems contribute to improving communication quality, employee participation, and organizational commitment.

Research related to digital systems and employee behavior conducted by Mesra (2023) also showed that technology-based organizational systems significantly influence employee effectiveness and organizational performance. Therefore, the implementation of Digital HR Practices is considered capable of increasing employee engagement because employees feel supported by efficient and modern organizational systems.

D. Conceptual Framework

The conceptual framework in this study explains the relationship between Digital HR Practices as the independent variable and Employee Engagement as the dependent variable. Digital HR Practices are expected to positively influence employee engagement because digital systems provide convenience, flexibility, transparency, and better work experiences for employees.

Organizations that successfully implement digital HR systems are considered more capable of creating positive employee perceptions and improving employees' emotional attachment to their work and organization. Therefore, the conceptual framework of this study assumes that better implementation of Digital HR Practices will lead to higher employee engagement levels at PT Permodalan Nasional Madani Medan.

E. Conceptual Framework

The conceptual framework of this study explains the relationship between Digital HR Practices and Employee Engagement. The implementation of Digital HR Practices is expected to improve employee engagement by providing better work experiences, flexibility, and organizational support. Based on the theoretical review, the conceptual framework is presented in Figure 1.

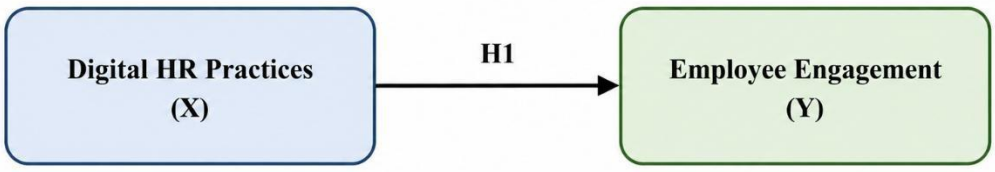

Figure 1. Conceptual Framework

F. Research Model

The research model was developed using SmartPLS to illustrate the relationship between Digital HR Practices and Employee Engagement. The SmartPLS model used in this study is presented in Figure 2.

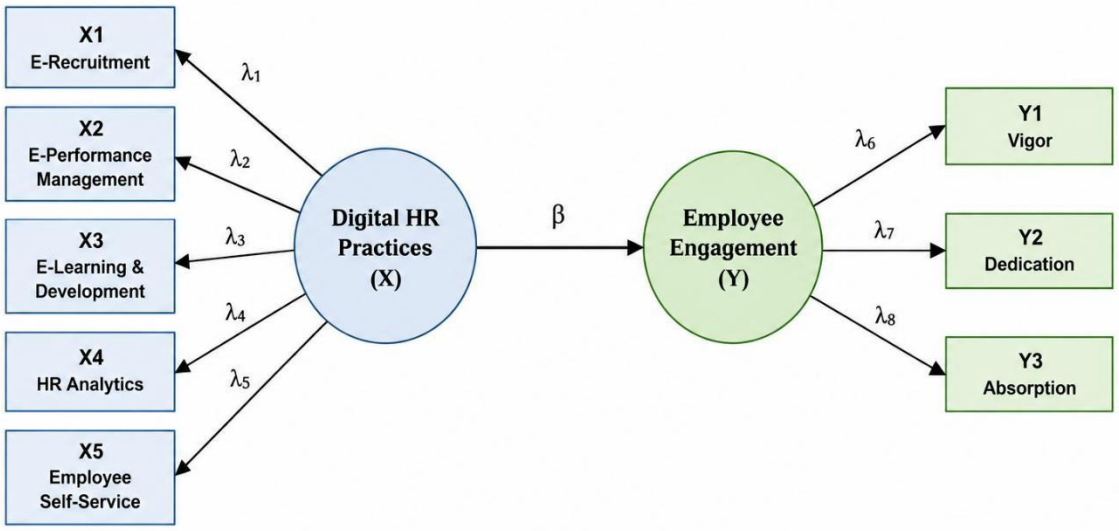

Figure 2. Research Model Using

E. Hypothesis

Based on the theoretical explanations and previous studies, the hypothesis proposed in this study is:

H1: Digital HR Practices have a positive and significant effect on Employee Engagement of employees at PT Permodalan Nasional Madani Medan.

Research Methodology

This study used a quantitative research approach with an associative research design. Quantitative research was applied because this study aimed to analyze the relationship between variables through numerical data and statistical analysis. The associative approach was used to determine the effect of Digital HR Practices on Employee Engagement among employees at PT Permodalan Nasional Madani Medan.

This research was categorized as explanatory research because it explained the causal relationship between the independent variable and the dependent variable through hypothesis testing. The study focused on examining whether Digital HR Practices significantly influence employee engagement within the organization.

The research was conducted at PT Permodalan Nasional Madani Medan. The organization was selected because it has implemented technology-based human resource management systems in several organizational activities. In addition, the company operates in the financial services sector, which requires adaptive and modern human resource management practices.

The population in this study consisted of all employees at PT Permodalan Nasional Madani Medan, totaling 50 employees. According to Sugiyono (2019), population refers to all subjects possessing characteristics relevant to the research objectives.

The sampling technique used in this study was non-probability sampling with a purposive sampling method. Respondents were selected based on specific criteria, including active employees who had worked for at least one year and were involved in work systems related to Digital HR Practices. Because the population size was relatively small, all 50 employees were used as research respondents.

Data collection was conducted through the distribution of questionnaires using a Likert scale with five measurement categories:

1 = Strongly Disagree
2 = Disagree
3 = Neutral
4 = Agree
5 = Strongly Agree

The variables in this study consisted of:

1. Independent Variable (X): Digital HR Practices
2. Dependent Variable (Y): Employee Engagement

Digital HR Practices were measured using several dimensions, including e-recruitment, eperformance management, e-learning and development, HR analytics, and employee selfservice systems. Meanwhile, Employee Engagement was measured using vigor, dedication, and absorption indicators.

The data analysis technique used in this study was simple linear regression analysis using Jamovi software. Jamovi was selected because it provides user-friendly statistical analysis features and is widely used in quantitative research. The software was used to analyze the influence of Digital HR Practices on Employee Engagement.

Several statistical tests were conducted in this study, including:

1. Validity Test
2. Reliability Test
3. Normality Test
4. Simple Linear Regression Analysis
5. t-Test (Partial Test)
6. Coefficient of Determination (R^2)

The validity test was conducted to determine whether the questionnaire items were valid in measuring the research variables. The reliability test was used to examine the consistency of the questionnaire instrument. Furthermore, the normality test was performed to ensure that the research data were normally distributed before conducting regression analysis.

Simple linear regression analysis was applied to determine the magnitude and direction of the effect of Digital HR Practices on Employee Engagement. The t-test was conducted to determine the significance of the independent variable on the dependent variable, while the coefficient of determination (R^2) was used to measure the contribution of Digital HR Practices in explaining Employee Engagement.

Through this methodology, the study is expected to provide empirical evidence regarding the influence of Digital HR Practices on Employee Engagement among employees at PT Permodalan Nasional Madani Medan.

Results

A. Respondent Characteristics

The respondents in this study were employees of PT Permodalan Nasional Madani Medan. A total of 50 questionnaires were distributed and successfully collected from all respondents. Based on gender, most respondents were female employees. Based on age, the majority of respondents were between 25–35 years old, indicating that productive-age employees dominated the organization. In terms of work experience, most respondents had worked for more than one year, meaning that respondents had sufficient experience in understanding the implementation of Digital HR Practices within the company.

B. Descriptive Statistics

Descriptive statistical analysis was conducted to determine the average responses of respondents toward each research variable.

Table 1. Descriptive Statistics

Variable	Mean	Std. Deviation	Category
Digital HR Practices	4.18	0.512	High
Employee Engagement	4.11	0.487	High

The results indicated that Digital HR Practices and Employee Engagement were categorized as high. This means that employees perceived the implementation of digital HR systems positively and demonstrated high levels of engagement toward the organization.

C. Validity Test

The validity test was conducted to determine whether each questionnaire item was capable of measuring the research variables accurately. The validity test was performed using Pearson Correlation analysis through Jamovi software.

Table 2. Validity Test Results

Variable	Item	r-count	r-table	Description
Digital HR Practices	X1	0.712	0.278	Valid
Digital HR Practices	X2	0.735	0.278	Valid
Digital HR Practices	X3	0.768	0.278	Valid
Digital HR Practices	X4	0.744	0.278	Valid
Employee Engagement	Y1	0.781	0.278	Valid
Employee Engagement	Y2	0.759	0.278	Valid
Employee Engagement	Y3	0.806	0.278	Valid
Employee Engagement	Y4	0.788	0.278	Valid

The results showed that all questionnaire items had correlation coefficient values greater than the r-table value of 0.278. Therefore, all research instrument items were declared valid and suitable for further analysis.

D. Reliability Test

Reliability testing was conducted using Cronbach's Alpha analysis through Jamovi software.

Table 3. Reliability Test Results

Variable	Cronbach's Alpha	Description
Digital HR Practices	0.871	Reliable
Employee Engagement	0.889	Reliable

The results indicated that all variables had Cronbach's Alpha values greater than 0.70. Therefore, all variables in this study were considered reliable and consistent for measurement.

E. Normality Test

The normality test was conducted using the Shapiro-Wilk test through Jamovi software. **Table 4.** Normality Test Results

Variable	Sig. Value	Description
Digital HR Practices	0.200	Normal
Employee Engagement	0.176	Normal

The results showed that all significance values were greater than 0.05, indicating that the research data were normally distributed and suitable for regression analysis.

F. Simple Linear Regression Analysis

Simple linear regression analysis was conducted to determine the effect of Digital HR Practices on Employee Engagement.

Table 5. Simple Linear Regression Results

Variable	B	t-value	Sig.
Constant	1.284	2.961	0.005
Digital HR Practices	0.726	8.413	0.000

Based on the regression results, the regression equation can be formulated as follows: Employee Engagement = 1.284 + 0.726 Digital HR Practices

The regression coefficient value of 0.726 indicates that Digital HR Practices have a positive effect on Employee Engagement. This means that better implementation of Digital HR Practices will increase employee engagement levels at PT Permodalan Nasional Madani Medan.

G. t-Test (Partial Test)

The t-test was conducted to determine the significance of the influence of Digital HR Practices on Employee Engagement. Based on the analysis results, the t-value of Digital HR Practices was 8.413 with a significance value of 0.000. Since the significance value was less than 0.05, Digital HR Practices had a positive and significant effect on Employee Engagement. Therefore, the hypothesis proposed in this study was accepted.

H. Coefficient of Determination (R^2)

Table 6. Coefficient of Determination Results

R	R^2	Description
0.772	0.596	Strong

The coefficient of determination value (R^2) was 0.596, meaning that Digital HR Practices contributed 59.6% to Employee Engagement, while the remaining 40.4% was influenced by other variables not examined in this study.

I. Discussion

The results of this study showed that Digital HR Practices had a positive and significant effect on Employee Engagement among employees at PT Permodalan Nasional Madani Medan. The findings indicated that employees who perceived digital HR systems positively tended to have higher emotional attachment, enthusiasm, and dedication toward their work and organization. The implementation of digital HR systems such as online performance management, digital communication systems, and e-learning platforms provided convenience and flexibility for employees in carrying out work activities. This condition improved employee experiences and strengthened employees' perceptions of organizational support.

The findings of this study support the theory proposed by Saks (2022), which explained that organizational support through effective systems and work experiences could improve employee engagement. Furthermore, the results are consistent with the study conducted by Bondarouk and Brewster (2021), which found that Digital HR Practices positively influence employee experiences and organizational attachment. This study also supports previous research conducted by Mesra (2023), which explained that technology-based systems significantly improve employee effectiveness and organizational performance. Therefore, organizations are encouraged to optimize Digital HR Practices to improve employee engagement and organizational effectiveness.

Conclusion

Based on the results of the study, it can be concluded that Digital HR Practices have a positive and significant effect on Employee Engagement among employees at PT Permodalan Nasional Madani Medan. The regression analysis results showed that the significance value was below 0.05, indicating that the implementation of digital-based human resource management systems contributes to increasing employee engagement within the organization.

The implementation of Digital HR Practices, such as e-recruitment, digital performance management, online training systems, and employee self-service platforms, provides convenience, flexibility, and transparency for employees in carrying out work activities. These conditions improve employee work experiences and strengthen employees' emotional attachment to the organization.

The coefficient of determination results also showed that Digital HR Practices contributed significantly to Employee Engagement, while the remaining percentage was influenced by other

variables outside this study. Therefore, organizations are encouraged to continuously optimize technology-based human resource management systems to improve employee engagement and organizational effectiveness.

This study is expected to contribute theoretically to the development of human resource management studies, particularly regarding Digital HR Practices and Employee Engagement. Practically, the findings may serve as recommendations for PT Permodalan Nasional Madani Medan in improving digital HR systems to create higher employee engagement and better organizational performance.

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