

A Study on Employee's Perception Towards Human Resources Digitalization in Industry 4.0

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ABSTRACT

The study looks at how employees view the digitalization of human resources (HR) in the context of Industry 4.0. Employee awareness, productivity impact, influencing variables, and satisfaction with digital HR practices are the main topics of discussion. 300 employees participated in the study, and Morgan's Table was used to choose a sample size of 181 responses. Structured questionnaires were used to gather primary data, which was then analyzed using statistical methods such the Chi-square test, Mann-Whitney test, correlation, and descriptive statistics. The results show that employees' perceptions of HR digitalization, which improves efficiency and productivity, are usually positive and their level of awareness is modest. Effectiveness is greatly impacted by elements including organizational support, training, and system usability. In general, digital HR systems' responsiveness, usability, and accessibility all affect employee satisfaction.

Key Words: HR Digitalization, Industry 4.0, Employee Perception, Productivity, Employee Satisfaction, Digital HR Practices, Organizational Support.

INTRODUCTION

The organizations perform in a competitive, advanced technology economy in today's fast-paced business environment, where digital transformation is essential. Organizational practices, especially Human Resource Management (HRM), have been greatly impacted by the rise of Industry 4.0. The use of cutting-edge technologies to expedite HR tasks like hiring training, performance monitoring, and employee engagement is known as HR digitalization. It decreases manual work. While increasing productivity, accuracy, and decision-making. Workers must adjust to these digital developments for increased performance and productivity since they are essential to the success of the company. The success of implementation is determined by how they view digital HR practices. Therefore, firms hoping to attain sustained growth must comprehend employee awareness, contentment, and acceptance of HR digitalization.

NEED OF THE STUDY

The implementation of digital technology in the industry 4.0 era has resulted in a rapid transformation of HRM, which is why this study is necessary. Businesses are adopting digital HR practices more frequently, but employee understanding, acceptability, and efficient use are critical to their success. It is important to comprehend how these digital systems affect worker performance, efficiency, and production. To guarantee successful implementation, it's also critical to identify elements like technology support, training, and system usability. Additionally, the study aids in the analysis of employee satisfaction levels, which have an impact on the ongoing usage of digital HR solutions. All things considered, this research is crucial for finding gaps and offering suggestions for enhancing HR digitization tactics.

OBJECTIVES OF THE STUDY

1. To understand employee's awareness of digital HR practices.
2. To study the impact of HR digitalization on employee productivity.
3. To examine the influencing factors on the effectiveness of human resource digitalization in Industry 4.0.
4. To assess the level of employee satisfaction with HR digitalization practices in Industry4.0.

SCOPE OF THE STUDY

The study's boundaries and coverage are referred to as its scope. The purpose of this study is to investigate the function and efficacy of HR digitization in businesses in the context of Industry 4.0. It addresses how well-informed employees are about digital HR procedures, how comfortable they are using digital tools, and how these systems affect employee performance and productivity. The report also analyzes elements like management engagement, training, and technology support that affect how successful HR digitization is. It also evaluates how satisfied employees are with digital HR procedures. The study, which has limitations to a subset of the organization's employees, wants to offer suggestions for enhancing HR digitization tactics.

REVIEW OF LITERATURE

1. Subin Thomas,et.al(2026), Artificial Intelligence (AI) is transforming workplace innovation through IoT, robotics, augmented reality, and the metaverse. Human Resources (HR) must change to match human potential with technical improvements under the industry 4.0 paradigm, which emphasizes flexibility, resilience, precision, and productivity.
2. Jana Hornungova,et.al(2025), Human resources, sustainability, and digitization are important elements influencing contemporary organizational operations. With the use of cutting-edge tools like artificial intelligence and digital platforms, the technological revolution is changing industries, especially in the era of Industry 4.0.
3. Aziza B Irmatova,et.al(2025), The impact of intellectual and digital technologies on the standard of training for human resources across a range of industries. Not all governments in the top nations for digitalization and artificial intelligence (AI) actively engage in enhancing staff members' digital readiness and advanced training related to new specialization requirements. The USA, Israel, and the Netherlands are among the nations that exhibit strong indicators of labour resources' ability to adapt to new difficulties brought about by the emergence of digital technologies, including artificial intelligence.
4. Mariam Khalid Alshaibani,et.al(2024), This study uses a Likert-scale questionnaire for 404 randomly selected workers to investigate the relationship between digitization and HR practices in Bahrain's banking industry. Results show that digitalization has a major positive effect, especially in hiring and selection. Concerns about privacy, ambiguous policies, opposition to change, a lack of resources, technical difficulties, and communication problems are some of the difficulties. One-way ANOVA is used in the study to show significant differences according to gender and years of experience. The findings highlight the necessity of strategic HR enhancements to overcome obstacles and capitalize on the beneficial effects of digitalization on procedures. Policymakers and banking experts can learn a lot from this study.
5. Umasankar Murugesan,et.al(2023), Through robotics innovation, which encompasses both AI and the Internet of Things (IoT), artificial intelligence (AI) has created enormous prospects in the workplace. The potential advantages of Industry 4.0 are thought to include precision, efficiency, and flexibility. The Human Resource (HR) function is one of many modifications that must be made to execute Industry 4.0. HR expertise is more important in Industry 4.0 and gives the company an advantage. To react to the challenges and demands, HR should be more cautious and flexible. We research how AI affects Industry 4.0 HR practices and digitization.

RESEARCH METHODOLOGY RESEARCH DESIGN

A research's overall plan that describes how data is collected, analyzed, and evaluated is known as its research design. The research objectives, methodology, sampling, data gathering strategies, and analytic processes are all included. A well-designed study takes ethical considerations into account while guaranteeing validity, reliability, and clarity. It serves as a guide for the researcher, assisting in the acquisition of precise and significant findings.

DESCRIPTIVE RESEARCH

The present study uses a Descriptive Research Design. Descriptive research design is used to describe the characteristics of a population or phenomenon. It focuses on observing and documenting the current situation without manipulating variables.

Therefore, to analyze how employees view HR digitalization in the context of Industry 4.0, the study employs descriptive research. It provides insights into how digital HR practices affect HR functions and organizational performance by analyzing employee awareness, the influence on productivity, important influencing factors, and satisfaction.

DATA COLLECTION

Primary Data: Collected through structured questionnaires distributed among employees and HR personnel.

Secondary Data: Collected from journals, books, company records, and relevant online sources.

SAMPLING METHOD

The study uses non-probability sampling.

SAMPLING TECHNIQUE

Convenience sampling was adopted, where respondents were selected based on accessibility, availability, and willingness to participate.

SAMPLESIZE

A total of 181 employees were selected as respondents. The sample size is considered adequate to represent the population.

STATISTICAL TOOLS USED

The gathered information was examined using:

- Chi – Square test
- The Mann-Whitney U Test
- Descriptive Statistics Test
- Correlation of Spearman Rank

DATAANALYSIS

The collected data were analyzed using statistical tools to interpret employee responses

Percentage = (Number of Respondents / Total Respondents) × 100

RESULTS & DISCUSSION

Table -1: CHI – SQUARE TEST

Chi-Square Tests

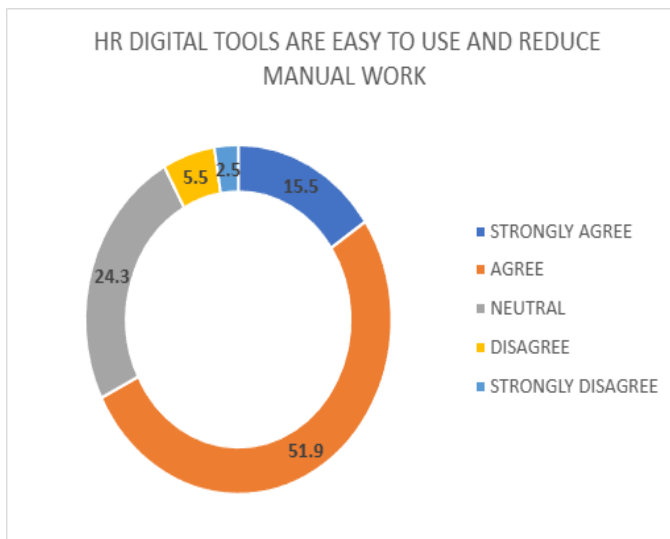
Chi-Square Tests

	Value	df	Asymptotic Significance (2-sided)
Pearson Chi-Square	3.673 ^a	4	.452
Likelihood Ratio	3.712	4	.446
Linear-by-Linear Association	1.367	1	.242
N of Valid Cases	181		

a. 3 cells (30.0%) have expected count less than 5. The minimum expected count is 3.18.

The Chi-square test was conducted to examine the association between gender and employees’ awareness of accessing the HR portal. The results show that the Pearson Chi-square value is 3.673 with a significance value of 0.452, which is greater than 0.05. This indicates that there is no statistically significant association between gender and awareness of accessing the HR portal. The cross-tabulation shows that the majority of respondents in both genders fall under the “Agree” category, indicating a similar level of awareness among male and female employees.

FIG. NO: HR DIGITAL TOOLS ARE EASY TO USE TOOLS REDUCE MY MANUAL WORK.



The above table indicates that 15.5% of the respondents strongly agree that HR digital tools are easy to use and reduce manual work, reflecting a positive opinion among a section of employees. A majority of 51.9% of the respondents agree with the statement, showing a strong favorable perception. About 24.3% of the respondents remain neutral, indicating uncertainty or a balanced view. Meanwhile, 5.5% of the respondents disagree, and 2.5% strongly disagree, representing a smaller proportion with a negative opinion. Overall, the findings reveal that most respondents have a positive perception, suggesting that HR digital tools are generally considered user-friendly and effective in reducing

manual work.

SUGGESTIONS

Based on the findings, by providing prompt, transparent, and understandable updates about digital HR practices via emails, portals, and notifications, organizations can improve their communication systems. Regular and organized training programs, like workshops and refresher courses, are crucial, particularly for inexperienced and new hires. To provide easy accessibility, HR systems should have a straightforward, user-friendly, and mobile-compatible user interface. By implementing automated solutions like AI chatbots and self-service alternatives, organizations may improve the speed and effectiveness of HR services. Employee engagement should be promoted by frequent feedback and participation, and strong management support is required to encourage staff to use digital HR solutions efficiently. It's also critical to have a supportive workplace with appropriate IT infrastructure. Organizations should also raise awareness through training and upgrading digital HR systems on a regular basis.

CONCLUSION

The study concludes that According to the study's findings, workers view the digitalization of human resources in Industry 4.0 favorably. There is a high degree of digital adoption across the company, as evidenced by the fact that most employees are aware of digital HR practices, often utilize HR tools, and have received sufficient training. The results show that by cutting down on paperwork, streamlining procedures, and lowering reliance on HR personnel for everyday tasks, HR digitalization has greatly increased productivity and efficiency. Additionally, workers believe that digital HR systems are accessible, easy to use, and useful for providing quicker services. Additionally, the successful application of digital HR practices depends heavily on elements like management support, good communication, employee participation, appropriate training, and a positive work environment. Employee satisfaction with digital HR processes is often quite high. However, these methods can be made even more effective by improving reaction times and communication clarity. Therefore, to preserve competitiveness in the industry for 4.0 years and enhance organizational performance and employee happiness, HR digitalization is crucial.

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