

A Study on Technology and Artificial Intelligence in Hr with Reference to Office Framework India Operations Center Pvt. Ltd, Chennai.

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Abstract:

This study examines the impact of technology and Artificial Intelligence (AI) in Human Resource (HR) at Office Frame Work, Chennai. Using a descriptive research design, primary data was collected from 110 employees through structured questionnaires and analyzed using percentage analysis, correlation, and chi-square tests.

The findings indicate that AI significantly improves recruitment efficiency, decision-making, and overall HR productivity. Most employees are aware of AI applications and perceive them positively, especially in recruitment and workflow automation. However, challenges such as high cost, data privacy concerns, and lack of technical skills hinder its full adoption.

The study concludes that the integration of AI in HR can significantly enhance organizational performance if implemented effectively. It emphasizes the need for proper training, ethical practices, and a balanced approach combining human judgment with AI capabilities for successful adoption.

Keywords:

Artificial Intelligence (AI), Human Resource (HR), HR Technology, Recruitment, Employee Engagement, Performance Management, Data Analytics, Automation, Decision Making and Workforce Planning.

Introduction

Technology and Artificial Intelligence (AI) are transforming Human Resource Management (HRM) from a traditional administrative function into a strategic role. Modern HR practices now use digital tools and AI to improve efficiency in areas such as recruitment, performance management, and employee engagement.

AI helps automate routine tasks, supports data-driven decision-making, and enhances employee experience. However, challenges such as high cost, lack of technical skills, and data privacy concerns affect its adoption.

This study focuses on analyzing the role and impact of technology and AI in HR and how they improve organizational efficiency and effectiveness.

Review of Literature

1. **John W. Boudreau (2017):** Emphasized that technology has transformed HR from an administrative function into a strategic partner. He highlighted that data analytics and digital tools enable better workforce planning and decision-making.
2. **Erik Brynjolfsson and Andrew McAfee (2017) :** Stated that AI enhances human capabilities rather than

replacing jobs. Their study suggests that AI leads to a shift in HR roles towards more analytical and strategic functions.

3. **Peter Cappelli (2018)**: Focused on the role of AI in recruitment and found that AI systems improve efficiency by automating resume screening and reducing hiring time. He also noted that AI can minimize human bias in hiring decisions.

4. **McKinsey & Company (2018)**: Indicated that AI improves productivity and enhances talent acquisition processes. It also emphasized the need for training employees to effectively use AI tools.

5. **Josh Bersin (2019)**: Highlighted that AI-driven tools such as chatbots and virtual assistants improve employee engagement and overall employee experience.

Objective:

- To understand the role of technology and AI in HR functions.
- To examine how AI improves recruitment and employee management.
- To analyze the benefits and challenges of using AI in HR.
- To relate the impact of AI on HR decision-making and efficiency.

Research Design:

The research design adopted for this study is descriptive research design. It helps in describing the current status of technology and Artificial Intelligence (AI) in Human Resource Management and understanding its impact on HR function.

Sample Size

Sample size means the number of sampling units from the organization for investigation. The sample size for the study consist of 110 respondents.

Sampling unit

The sample unit of this study is Office FrameWork India Operations Center Pvt. Ltd, Chennai.

Data Sources

Data is collected from primary and secondary sources. The study depends mainly on the primary data and secondary data namely books, journals, questionnaire and internet.

Primary Data

Primary data is original, first-hand information collected directly by a researcher or organization specifically for their own research purposes.

Primary data is collected using :

- Structured questionnaire
- Interaction with employees

GENDER OF THE RESPONDENTS

option	Count	Percentage %
Male	57	51.8

Female	53	48.2
Total	110	100

Source: Primary Data

INTERPRETATION

From the above table, it is interpreted that 51.8% of the respondents are male and 48.2% of the respondents are female.

Thus the majority of the respondents are male.

AGE OF THE RESPONDENTS

option	count	Percentage %
20-25 years	65	59.1
25-30 years	28	25.5
30-35 years	10	9.1
35-40 years	4	3.6
Above 40 years	3	2.7
Total	110	100

Source: Primary Data

INTERPRETATION

From the above table, it is interpreted that 59.1% of the respondents are in the age group of 20-25 years, 25.5% of the respondents are in the age group of 25-30 years, 9.1% of the respondents are in the 30-35 years, 4% of the respondents are in the 35-40 years and 3% of the respondents are in 40 years and above.

Thus the majority of the respondents are in the age group of 20-25 years.

EDUCATION QUALIFICATION OF THE RESPONDENTS

option	count	Percentage %
Diploma	7	6.4
UG	45	40.9

PG	57	51.8
Others	1	0.9
Total	110	100

Source: Primary Data

INTERPRETATION

From the above table, it is interpreted that 51.8% of the respondents are Post graduates, 40.9% are Under graduates, 6.4% of the respondents are completed Diploma and 0.9% of the respondents are from others.

Thus the majority are Post Graduates.

WORK EXPERIENCE OF THE RESPONDENTS

Option	count	Percentage %
0-1 years	41	37.3
2-5 years	47	42.7
6-9 years	12	10.9
10-15 years	8	7.3
More than 15 years	2	1.8
Total	110	100

Source: Primary Data

INTERPRETATION

From the above table, it is interpreted that 42.7% of the respondents have 2 to 5 years of experience, 37.3% of the respondents have less than 1 year of experience, 10.9% of the respondents have 6 to 9 years of experience, 7.3% of the respondents have 10 to 15 years of experience and 1.8% of the respondents have more than 15 years of experience.

Thus the majority of the respondents have 2 – 5 years of experience.

USE OF AI IN HR FUNCTIONS

Option	count	Percentage %
Recruitment	43	39.1
Training	32	29.1
Payroll	20	18.2
Performance management	12	10.9
Employee engagement	3	2.7
Total	110	100

Source: Primary Data

INTERPRETATION

The above table indicates the among 110 respondents 39.1% of respondents stated recruitment, 29.1% stated training, 18.2% stated payroll, 10.9% of stated performance management and 2.7% stated employee management.

Thus the majority of the respondents use AI for recruitment.

EFFICIENCY OF RECRUITMENT IN AI

Option	count	Percentage %
Agree	56	50.9
Strongly agree	22	20
Neutral	27	24.5
Disagree	4	3.6
Strongly disagree	1	0.9
Total	110	100

Source: Primary Data

INTERPRETATION

The above table indicates that among 110 respondents, 20% strongly agree , 50.9% agree, 24.5% are neutral , 3.6% disagree , 0.9 % strongly disagree that the AI improve recruitment efficiency.

Thus the majority of the respondents agree with AI improves recruitment efficiently.

AI STREAMLINING HR WORKFLOWS

Option	count	Percentage %
Agree	43	39.1
Strongly agree	27	24.5
Neutral	33	30
Disagree	6	5.5
Strongly disagree	1	0.9
Total	110	100

Source: Primary Data

INTERPRETATION

The above table indicates that among 110 respondents, 24.5% strongly agree , 39.1% agree, 30% are neutral , 5.5% disagree , 0.9 % strongly disagree that the AI reduce manual workload in HR.

Thus, a majority of respondents agree that AI reduces the manual workload in HR.

OBSERVATION OF CHALLENGES

Option	count	Percentage %
Cost	32	29.1
Data privacy	30	27.3
Lack of skills	29	26.4
Resistance to change	12	10.9
Lack of transparency	7	6.4
Total	110	100

Source: Primary Data

INTERPRETATION

The above table indicates that among 110 respondents 29.1% of respondents stated cost, 27.3% stated data privacy, 26.4% stated lack of skills, 10.9% of stated resistance to change and 6.4% stated lack of transparency.

Thus, the majority of the respondents challenge was cost.

AI DRIVEN DECISION MAKING IN HR

Option	count	Percentage %
Agree	49	44.5
Strongly agree	23	20.9
Neutral	27	24.5
Disagree	10	9.1
Strongly disagree	1	0.9
Total	110	100

Source: Primary Data

INTERPRETATION

The above table indicates that among 110 respondents, 20.9% strongly agree , 44.5% agree, 24.5% are neutral , 9.1% disagree , 0.9 % strongly disagree that the AI improve decision making in HR.

Thus, the majority of respondents agree AI improves HR decision making.

EFFECTIVENESS OF AI IN HR

option	count	Percentage %
Excellent	47	42.7
Good	45	40.9
Average	16	14.5
Poor	0	0
Very poor	2	1.8
Total	110	100

Source: Primary Data

INTERPRETATION

From the above table, it is interpreted that 42.7% respondents view AI as excellent, 40.9% respondents view AI as good, 14.5% respondents view AI as average, no respondents view AI as poor and 1.8% of the respondents view AI as very poor.

Thus, the majority of the respondents overwhelmingly positive reception of AI in HR.

CHI-SQUARE TEST

Assessing the relationship between work experience to effectiveness of AI in HR in Office Frame Work India Operations Center Private Limited.

Null Hypothesis (H₀): There is no significant association between work experience to effectiveness of AI in HR in Office Frame Work India Operations Center Private Limited.

Alternative Hypothesis (H₁): There is a significant association between work experience to effectiveness of AI in HR in Office Frame Work India Operations Center Private Limited.

Difference	Average	Excellent	Good	Very poor	Grand Total
0 - 1 years	4	15	22	0	41
2 - 5 years	6	24	16	1	47
6 - 9 years	4	6	2	0	12
10 - 15 years	1	1	5	1	8
Above 15 years	0	1	0	0	1
Grand Total	16	47	45	2	110

CHI-SQUARE TEST			
	Value	Df	Asymptotic Significant (2- sided)
Pearson Chi-Square	23.10	12	0.027
No. of Valid Cases	110		
a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 0.02			

Conclusion:

Here, P - value is smaller than expected count so we are going to reject the Null Hypothesis (H0) of Different work experience of employee that are not type to effectiveness of AI in HR in Office Frame Work India Operations Center Private Limited.

At the same time, we have to accept the Alternative Hypothesis (H1) Different work experience of employee that are type to effectiveness of AI in HR in Office Frame Work India Operations Center Private Limited.

CORRELATION ANALYSIS

To perform a Correlation Analysis between Qualification (X) and Criteria of Overall recruitment process (Y). Calculate the Pearson correlation coefficient. This coefficient measures the strength and direction of the liner relationship between two variables. The following data for the X and Y variables are provided to find the sample correlation coefficient.

HR workflows (X)	43	27	33	6	1
AI 's reduction of bias in recruitment (Y)	38	22	44	4	2

HR workflows (X)	AI 's reduction of bias in recruitment (Y)	X	Y	X ²	Y ²	XY
43	38	21	16	336	441	256
27	22	5	0	0	25	0
33	44	11	22	242	121	484
6	4	-16	-18	288	256	324
1	2	-21	-20	420	441	400
110	110	0	0	1286	1284	1464

$$r = \frac{\sum(X - \bar{X})(Y - \bar{Y})}{\sqrt{\sum(X - \bar{X})^2 \cdot \sum(Y - \bar{Y})^2}}$$

1286

 $r =$ $\sqrt{1284 \times 1464}$ **r = 0.94****Conclusion:**

The Pearson correlation coefficient r is approximately **0.94**. This value indicates a moderate positive correlation between AI streamlining HR workflows and AI's reduction of bias in recruitment organization of Office Frame Work India Operations Center Pvt. Ltd

FINDINGS

- Majority of respondents (59.1%) belong to the age group of 20–25 years, indicating a young workforce.
- The gender distribution is almost equal, with 51.8% male and 48.2% female respondents.
- Most respondents (51.8%) are postgraduates, showing a highly educated sample group.
- A significant portion of employees (77.3%) are aware of AI applications in HR.
- Around 60% of respondents confirm that technology is used in HR functions within the organization.
- AI is primarily used in recruitment (39.1%), followed by training and payroll functions.
- A majority (50.9%) agree that AI improves recruitment efficiency.
- About 39.1% of respondents agree that AI helps in reducing manual workload and streamlining HR processes.
- The major challenges in adopting AI are cost (29.1%), data privacy (27.3%), and lack of skills (26.4%).
- Most respondents (44.5%) agree that AI improves decision-making in HR.
- Around 60.9% believe that AI enhances the quality of hiring.
- A large portion of respondents (59.1%) agree that AI reduces HR processing time.
- About 60% of employees are comfortable using AI tools in the workplace.
- Opinions on AI replacing jobs are divided, with equal responses for “Yes” and “No” (34.5% each).
- The overall effectiveness of AI in HR is rated positively, with 42.7% rating it as excellent and 40.9% as good.
- The chi-square test shows a significant relationship between work experience and the effectiveness of AI in HR.
- The main suggestion from respondents (49.1%) is to provide proper training for HR employees to effectively use AI tools.

CONCLUSION

The study concludes that technology and Artificial Intelligence (AI) play a significant role in transforming Human Resource Management (HRM). The findings indicate that AI is widely used in recruitment and has improved efficiency, reduced processing time, and enhanced the quality of hiring. It also supports better decision-making and helps streamline HR processes.

The study reveals that employees have a positive perception of AI and are generally comfortable using AI tools in the workplace. However, challenges such as high implementation cost, data privacy concerns, and lack of technical skills continue to hinder its full adoption.

Overall, AI has proven to be an effective tool in improving HR performance and productivity. The study suggests that organizations should focus on providing proper training, ensuring data security, and adopting a balanced approach that combines human judgment with AI capabilities for successful implementation.

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