

A STUDY ON INTELLIGENCE HUMAN RESOURCE SYSTEM SOURCE SMARTER, HIRE FASTER

* Dr. Madhu Shukrey, ** Sakshi Mukherjee, *** Gaurav Pagare, **** Harsh Narvekar
& ***** Veebha Jambhulkar

*Guide, **, ***, ****, ***** Students, B.K. Birla College (Empowered Autonomous Status), Kalyan.

Abstract:

The HR system had gone through multiple stages of evolution as it first started as fully manual process then it developed itself and eased E-documentation process by introducing tools like hrms erp, etc reducing workload and improving efficiency among the employees. Even with such advancement in HR technologies companies still require more use of HR intelligence system. Our study help to understand the advantages of HR technologies and also understanding the limitation where we can adopt more technology

This study aims to analyze how information system operates systematically within the human resource department of an organization. It also tries to understand how intelligent HR systems optimize the use of various resources such as human capital, financial resources, and technological tools. Additionally, the study focuses on analyzing the processes, policies, and structured framework involved in organizational development systems.

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Introduction:

Human Resource systems is an invisible architecture of any organization, which quietly shapes how people are hired, trained, evaluated, and inspired/motivated. If a company was consider as an artificial being, the HR system would be its pipeline that carries the signals between leadership and employees, turning strategy into action, and ensuring every part of the organization works in harmony.

HR system is a complex/simplified structure of policies, processes, and practices needed to maintain an organization's human capital effectively. It includes multiple level of tasks such as talent acquisition, learning and development, performance management, remuneration, employee relations, workforce planning etc. All such elements make sure that right people are assigned right roles, equipped with right expertise, and motivated to achieve organizational goals.

The modern HR systems keeps trying to evolve itself by going beyond its administrative tasks by align people strategies with business objectives, promoting a positive working culture, support employee well-being, and use data driven insights to guide decision making.

During the late 19th and early 20th century, Human Resource operations were largely consisted of manual process. The main focus during that time were on payment of wages and salaries and documentation management, making sure that employees were given payment on time.

Mid-20th century saw huge technological advancements that which transformed Human Resource functions. The introduction of Electronic Data Processing (EDP) systems in the year till 1950 and 1960 pronounced the first important shift to the way of automation in Human Resource process and could complete documentation and payroll faster and more accurately compared to doing task manually.

During the period of 1970 and 1980 Human Resource Information Systems (HRIS) saw rise, and expanded the scope of HR system and technology beyond its documentation and payroll function. HRIS integrated multiple HR functions in one system.

The early 2000 showcased notable shift to the cloud based Human Resource systems, which offered greater flexibility, reliability and accessibility compared to on-premises solutions. As Cloud-based systems allowed organizations to access their Human Resource database from anyplace, at any given time.

Today, modern Human Resource systems is highly integrated and intelligent, encompassing a wide range of functions which support entire employee lifecycle. These modern HR system make use of Machine learning, AI and predictive analytics to provide actionable insights and automate daily tasks.

In essence, an effective HR system transforms talent into performance and individuals into a cohesive, goal oriented workforce.

Problem of Study:

1. Data Privacy and Security Risk

Intelligent HR systems consist of employee's data such as personal details, salary and performance records. If not put in secured system with security measures there is a higher chances of data breaches, unauthorized access and misuse of confidential information. This may makes employees question whether they could trust HR systems or not.

2. Implementation Cost

To adopt intelligent HR systems organizations have to spend a lot on software, infrastructure and maintenance. This can be tough for medium-sized organizations.

3. Resistance to Technological Change

Some employees and HR professionals might not want to use HR systems. They may worry that they do not have the skills to use the new systems. They might also fear that automation will replace them or they might just feel uncomfortable, with technology

Need of the Study:

HR has come from stacks of paperwork to partial automation. In the Modern corporate, technology moves on rapidly evolving and organisation keep on updating themselves with the changing world and its need, by utilizing their resources efficiently.

Still multiple organization constant tries to adapt yet still struggle to bridge the gap with HR system and its need within the organization.

Our research study on Intelligent Human Resources System, helps to understand how system fulfil the gaps, reduce bias, save time, and improve employee satisfaction and growth.

By utilising these system, organisation is able to observe the limitation between manual working and current modern technology.

Their need to take a detailed analysis at the Intelligence Human Resources System on how can modern technology and new ideas actually transform HR and its system, boost productivity and organisation adapt to constant change.

Limitation:

- The study may be based on a small number of respondents or a single organization, which restricts the generalization of findings to other industries or regions.
- If the research is conducted only in a specific area such as Mumbai or within one company, the results may not represent organizations operating in different cultural or economic environments.
- Data collected through questionnaires or interviews may be influenced by personal opinions, misunderstanding of AI concepts, or fear regarding automation replacing jobs.
- Organizations may not disclose complete HR analytics, AI algorithms, or performance data due to privacy and security concerns.
- Artificial Intelligence and machine learning technologies change quickly, which may make the study findings outdated within a short span.
- The researcher may face challenges in deeply analyzing AI algorithms or advanced HR analytics systems without specialized technical knowledge.

Rational Study:

With the changing times technology keeps on upgrading and innovating itself to make the life easier for everyone. Organization improve themselves to be more efficient and resourceful Even HR function overtime developed itself from being an complete manual process to being partially automated process by constantly adapting changes.

Keeping it all in consideration organization knows these effective HR system but many times multiple organizations still require more understanding to implement such system. This can be faced by concerns/issue related to data privacy, implementation costs, technological adaptability, and employee acceptance. Our research study these gap and give an effective solution to overcome such issues that can be solved by intelligent HR system.

The main of our research study isn't to figure out only the multiple efficient t way through which an hr system could use but also its role in modern organizations, know the advantages and limitations, and explore how they contribute to strategic HR management. The findings of this research will help organizations, HR professionals, and researchers better understand the practical implications of adopting intelligent HR technologies

Research Objectives:

1. To analyse the information system functioned systematically among human resource in the organizational development.
2. To understand how human intelligence system optimize the utilization of multiple resources such as human asset, cost benefits and technological tools.
3. To explore the multiple approaches regarding the process and policies of capacity building Intelligence Human Resource System.

Hypothesis:

Human:

H0 - The HR information system and employee performance monitoring are insignificant.

H1 - The HR information system and employee performance monitoring are related.

Resource:

H0 - Effective use of technology is not supported by human intelligence systems.

H2 - The efficient use of technical tools is supported by human intelligence systems.

System:

H0 - The effectiveness of the organizational development system is not influenced by analysis, procedures, or policies.

H3 - The success of the organizational development system is greatly impacted by logical analysis, procedures, and policies.

Literature Review:

1. Malathi Sriram and L. Gandhi, Shri Dharmasthala Manjunatheshwara "Exploring the dynamic Virtus of Machine Learning (ML) in Human Resource Management - A Critical Analysis of IT industry" (2017). This study by the authors explore the use of AI and machine learning and how they replace certain hr function and its further effects on the implementation on change within the IT industry. The data collection for the research is based on secondary data I.e report of the some company cases who implemented such changes. The study showed positive outcome and innovative way through AI and ML that can improve HR function.
2. Maneesh M Haridasan, (2021) : “ a study on Artificial intelligence in human resource – industry perspective”. This paper tries to address the AI use in industry perspective. The research further shows that AI helps in employee performance analysis, training and workforce planning. Companies can use Artificial Intelligence to figure out how employees behave guess what they will need in the future and make employees happier, at work. The study says that Artificial Intelligence is becoming a part of what Human Resources departments do today and it helps companies get more work done and do things better.
3. Prasanna matsa and Kusuma Gullamjji (2019): In the paper titled "To Study the Impact of Artificial Intelligence on Human Resource Management", This study by the author tries to understand impact of AI on the HRM. There study showcase that implementation of AI can lead to improving the organization performance and also has stronger impact on organization. There study also states that AI now participate in



every function of hr which start from recruitment on boarding, compensation and many more bur organization still face challenge to implement it due to high cost nature of such system.

4. Dr. Christina Parmar , Ms. Prerna Chauhan (2025) : In the paper titled “ A study on the impact of Artificial intelligence in human resource management”. Their reserch explain that AI is increasing its influence in field of HR, but its use differs by organizations need. Some companies have fully adopted AI, while many are still in the early stages of implementation or aren’t using it at all.

The study showcase that AI is mainly used in recruitment, payroll, and compliance. Tools like Chatgpt and excel are commonly used in hiring and payroll. AI helps in screening candidates faster, reducing hiring time, and improving accuracy in payroll. Still the opinions are divided about whether AI could or not reduces bias, as some believe it promotes fairness while others worry about algorithmic bias.

Although AI supports better performance tracking and data-based decisions, trust in AI decisions is still low. Major challenges in adopting AI include privacy concerns, lack of human interaction, resistance to change, and fear of job loss.

5. Darshan Surya Sahu in 2022 looked at how Artificial Intelligence or AI affects Human resource Management.He said that human resources are key to an organizations success. AI helps make HR tasks more efficient, accurate and productive. AI helps with recruitment by analyzing lots of data. It also improves training and employee performance. AI is useful for planning the workforce and making decisions. It reduces mistakes made by humans. The study by Darshan Surya Sahu found that AI makes things more efficient. It saves time. Helps organizations manage their human resources better. Artificial Intelligence is changing HR practices. Human resources and AI work together to improve HR functions. The use of AI, in HRM is important. AI and HRM are connected. Darshan Surya Sahus study on Artificial Intelligence and Human Resource Management is helpful.
6. jharna Soni (2022) studied the impact of Artificial Intelligence on Human Resource Management. The author explained that AI helps automate HR activities like recruitment, learning and development and performance management. AI improves efficiency, helps in lot of work and mostly save time and enhances employee performance. The study concluded that AI helps organizations adopt modern HR practices and improve overall productivity.

Research Methodology:

A. Research designs

The nature of our research paper is descriptive research. As this research consist of both data collection methods which is primary and secondary data.

Primary Data:

- Primary data was gathered from MNC, Education sector and others to understand how the human resource system works in different sector, with the help of questionnaire, which is the research primary instrument for the study.

Secondary Data:

- Secondary data was collected from past research i.e. book, research paper, journal and website relevant to intelligence human resource system.

Sampling:

- The sampling for research data was collected from 60-70 employees of multiple sectors.

Data Analysis:

- For the part of data analysis Pie chart, Z-Test, statistical tool which is used for data analysis and finding.

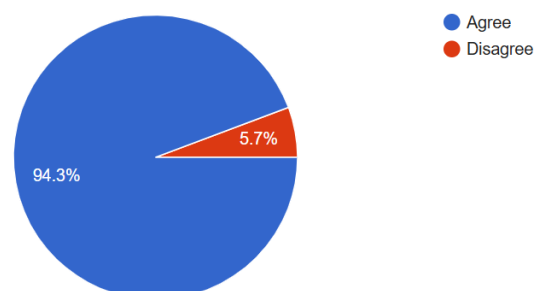
Z-Test result:

Question	Sample Proportion ($\hat{p}$)	Z-Value	P-Value	Result
Q1	0.886	6.459	0	Significant
Q2	0.643	2.393	0.01672	Significant
Q3	0.614	1.908	0.05644	Significant
Q4	0.8	5.02	0	Significant
Q5	0.557	0.954	0.34019	Not Significant
Q6	0.829	5.505	0	Significant
Q7	0.7	3.347	0.00082	Significant
Q8	0.886	6.459	0	Significant
Q9	0.314	3.112	0.00186	Significant
Q10	0.786	4.786	0	Significant
Q11	0.8	5.02	0	Significant
Q12	0.843	5.739	0	Significant
Q13	0.843	5.739	0	Significant

1. Workforce Planning Benefits from Enrolment Forecasts

Workforce planning benefits from enrollment forecasts.

70 responses

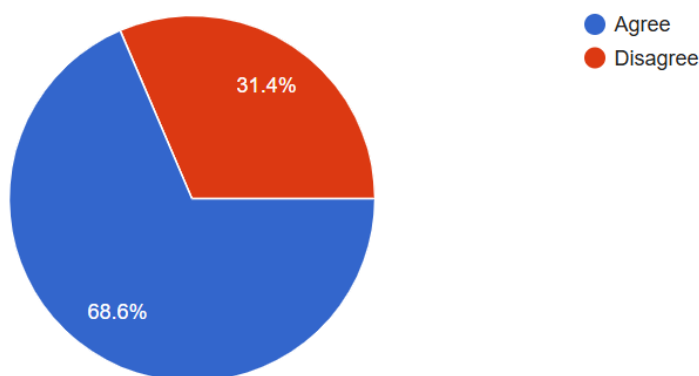


Out of 70 respondents who agreed with this statement was 93.9%. This indicates that a significantly high proportion of respondents believe that workforce planning benefits from enrollment forecasts. Hence, there is strong statistical support for the effectiveness of predictive planning in HR systems. Thus alternative hypothesis is concede and null hypothesis is rejected.

2. AI Training Paths Ignore Individual Skill Gaps

AI training paths ignore individual skill gaps.

70 responses

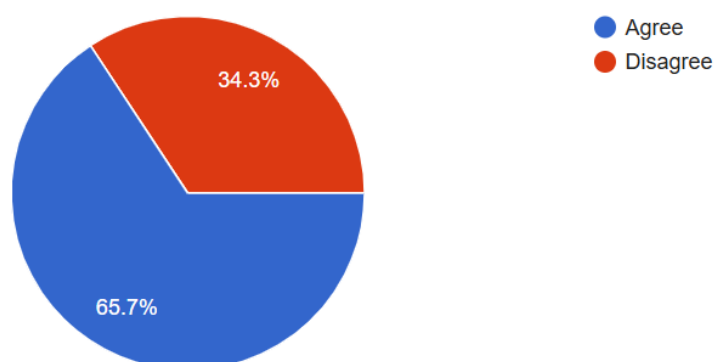


The agreement proportion was 68.2%. This suggests that respondents perceive limitations in AI training systems regarding personalization of skill gaps. Thus alternative hypothesis is accepted and AI training part shouldn't ignore skill gaps.

3. Manual Processes Outperform AI in Administrative Speed

Manual processes outperform AI in admin speed.

70 responses

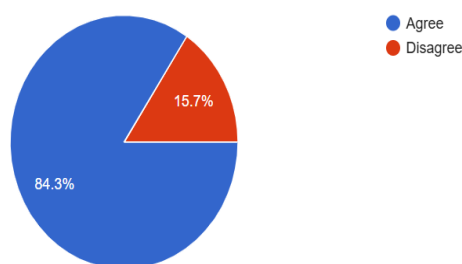


The proportion agreeing was 65.2%. Since the result is statistically significant, it indicates that a considerable number of respondents believe manual processes can sometimes outperform AI in administrative tasks. Thus alternative hypothesis is accepted, these doesn't implies that AI will always under perform manual process.

4. Chatbots Reduce HR Workload

Chatbots reduce HR workload for staff queries.

70 responses

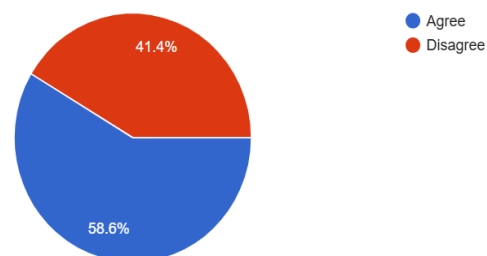


A total of 84.8% agreed. This shows strong statistical evidence that chatbots are perceived as effective tools in reducing HR workload. Thus alternative hypothesis is concede and the null hypothesis is rejected.

5. Transparency Issues Never Arise in AI Decisions

Transparency issues never arise in AI decisions.

70 responses

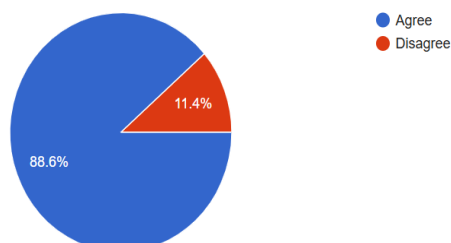


The agreement proportion was 59. This indicates that respondents are divided in their opinion regarding transparency in AI-based decisions. There is no statistically significant consensus. Thus null hypothesis is accepted.

6. Personalized Training Boosts Employee Skills

Personalized training boosts employee skills.

70 responses

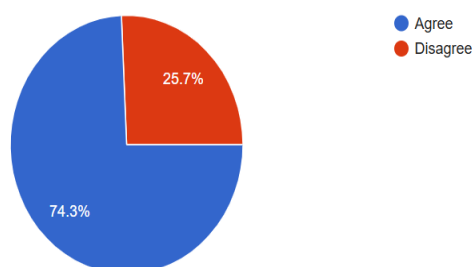


The agreement proportion was 87.9%. This result is statistically significant, suggesting strong support for AI-based personalized training systems. Thus alternative hypothesis is accepted and a significant focus is need to be given on employees skill.

7. AI Cuts HR Costs While Scaling Operations

AI cuts HR costs while scaling operations.

70 responses

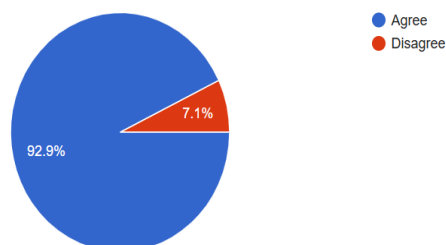


A total of 74.2% agreed. The result indicates significant agreement that AI contributes to cost reduction and scalability in HR functions. Thus alternative hypothesis is concede and thus null hypothesis is rejected.

8. Quality Work Life and Productivity Are Outputs of Effective HR Systems

Quality work life and productivity are outputs of an effective HR system.

70 responses

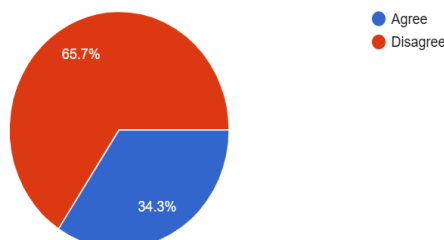


The agreement proportion was 93.9%. This highly significant result demonstrates strong belief in the role of effective HR systems in improving productivity and quality of work life. Thus alternative hypothesis is accepted and the balance within quality, work life, and productivity needs to be maintained for effectiveness of HR system.

9. Employees Are Just Costs

Employees are just costs.

70 responses

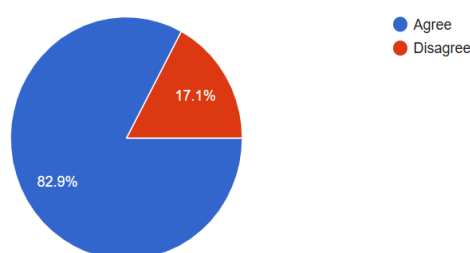


Only 33.3% agreed. Since the result is statistically significant and the proportion is below 50%, it indicates that respondents significantly reject the idea that employees are merely organizational costs. This supports the human capital perspective of HR management. Thus alternative hypothesis is concede and null hypothesis is rejected.

10. Best HR Resources Are Valuable and Rare

Best HR resources are valuable and rare.

70 responses

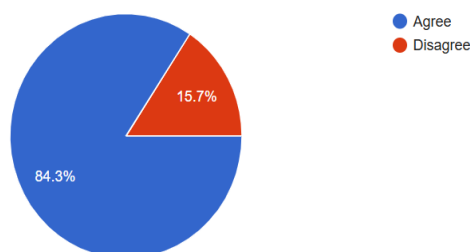


The agreement proportion was 83.3%. This significant result supports the view that strategic HR resources provide competitive advantage. Thus alternative hypothesis is accepted and these valuable resources should be used strategically and efficiently.

11. HRIS Helps with Payroll and Training Data

HRIS helps with payroll and training data.

70 responses

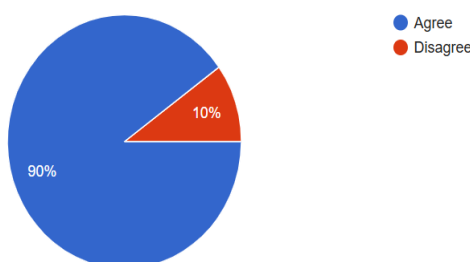


Out of 70 responses total of 84.8% agreed. The finding confirms significant support for HRIS systems in operational HR functions. Thus null hypothesis is rejected and alternative hypothesis is concede which show HRIS help for the payroll and training.

12. AI Tracks Employee Work by Data Patterns

AI tracks employee work by data patterns.

70 responses

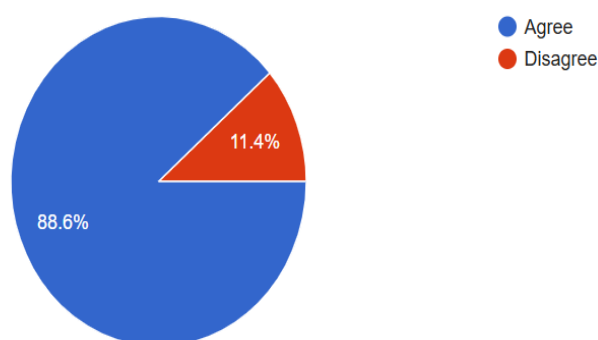


The agreement proportion was 89.4%. The result is statistically significant, indicating strong acceptance of AI-driven performance tracking systems. Thus alternative hypothesis is concede and null hypothesis is rejected.

13. Smart Training Uses AI to Fit Each Person

Smart training uses AI to fit each person.

70 responses



The agreement proportion was 89.4%. The findings strongly support adaptive and intelligent training systems tailored to individuals. Thus alternative hypothesis is concede and null hypothesis is rejected.

Challenges:

Human Behaviour factor and Perception:

Human Behaviour Perception are vary. Workers express their thoughts and give biased answers at the time of responses. That's why this is one of the biggest challenges.

Data Collection Difficulties:

At the time of Collection of data the employees are not gave answers properly as per questionnaire due to secreraly of Organization.

System-Related Problems:

Technical problems like obsolete systems, software bugs, or a lack of departmental integration can make it difficult to gather and analyze data efficiently.

Financial Constraints:

Funds may be needed for software tools, statistical analysis, travel, or questionnaire printing for conducting research. The study's breadth may be constrained by inadequate funding.

Remedies:

Managing Human Behaviour:

We can encourage open communication and honest answers by building a comfortable and friendly environment for the respondent without any biasness and boost their confidence.

Improving Data Collection Method:

Design clear and easy to understand questionnaires so that they do not face any difficulty, and give enough time to respondent to answer.

Upgrading and Maintaining System :

Implementing an integrated information system for better departmental coordination. Technical errors during data gathering and processing can be prevented with routine system check up.

Proper Budget Planning :

The proper Budget Planning is important for the proper allocating finance. It could also be beneficial to look for organizational support.

Conclusion:

The findings reveal that the majority of statements show statistically significant results, as calculated p-values is less than 0.05. Therefore, the null hypothesis was rejected for most variables. This indicates that respondents hold strong and definite opinions regarding the implementation and effectiveness of Intelligent Human Resource Systems.

HRIS systems are considered effective for payroll and training management.

Overall, the statistical evidence confirms that Intelligent Human Resource Systems have a significant impact on organizational performance, employee development, and HR efficiency. The respondents demonstrate a clear inclination toward technology-enabled HR practices, supporting the adoption and strategic implementation of AI-based systems in modern organizations.

References:

1. *Exploring the dynamica virtus of Machine Learning (ML) in Human Resource Management - A Critical Analysis of IT industry* - Malathi Sriram, L Gandhi
2. <https://share.google/jrD573eFplOYrTD77>
3. *To Study Impact of Artificial Intelligence on Human Resource Management* - Prasanna Matsa1, KusumaGullamajji2
4. <https://share.google/KannxEcyyDz2yMPBA>
5. *The adoption of artificial intelligence in human resources management practices* -
6. Nishad Nawaz, Hemalatha Arunachalam, Barani Kumari Pathi, Vijayakumar Gajenderan
7. <https://www.sciencedirect.com/science/article/pii/S266709682300054X>
8. *Research on human resource intelligence system based on knowledge* - G. Liu's
9. https://www.researchgate.net/scientific-contributions/G-Liu-2137462255?_tp=eyJjb250ZXh0Ijp7ImZpcnN0UGFnZSI6InB1YmxpY2F0aW9uIiwicGFnZSI6InB1YmxpY2F0aW9uIn19



10. *Human Resource Information System (HRIS): An Important Element of Modern Organization - Manna Akter Lina*

11. https://www.researchgate.net/scientific-contributions/Manna-Akter-Lina-2171389281?_tp=eyJjb250ZXh0Ijp7ImZpcnN0UGFnZSI6InB1YmxpY2F0aW9uIiwicGFnZSI6InB1YmxpY2F0aW9uIn19

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