



The Impact Of Hr Analytics On Organisational Culture And Employee Engagement

K. Ramakrishna^{1*}, Dr.S. Balaji², Dr.M.Sudheer Kumar³

^{1*}Assistant Professor, Department of Master of Business Administration, RGM College of Engineering and Technology (Autonomous) Nandyal & Research Scholar, Annamalai University, Chidambaram, Tamilnadu.

²Assistant Professor, Dept of Management Studies, Annamalai University, Chidambaram, Tamilnadu.

³Professor, Dept of Management Studies, RGM College of Engineering and Technology (Autonomous) Nandyal.

***Corresponding Author:** K.Ramakrishna

*Assistant Professor, Department of Master of Business Administration, RGM College of Engineering and Technology (Autonomous) Nandyal & Research Scholar, Annamalai University, Chidambaram, Tamilnadu.

<p>CC License CC-BY-NC-SA 4.0</p>	<p>The human resources (HR) department is among the most human-centric departments in every organization, primarily focusing on supporting and developing the workforce that ensures long-term growth and viability of businesses. This is why HR is a key area where data is particularly valuable. Data is an integral part of the HR landscape. Its data repository captures the dynamics of the organization's people and their workplace interactions. HR data can help organizations uncover more effective strategies for team management, enhance overall company performance, and yield improved business results, especially during times marked by uncertainty and change. A 2022 report by Harvard Business Review Analytic Services found that progressive organizations utilize people data beyond the HR department, and they often combine this people data with business data to deliver critical insights to their decision-makers.</p> <p>Key Words: <i>HR Analytics, HR analytics tools, Data Metrics, organisations, performance,</i></p>
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In this paper we study various use of HR Analytics in different organisations and the benefits of the use of HR Analytics. With the help of analytical tools the organisations can recognise the issues like performance, employee turnover and retention employee behaviour, etc by using the data available with the organisation. This research is conducted because of the lack of use of HR in many organisations. The use of HR is undermined in many organisations but in this modern technological world various analytical tools have been developed which are used by huge corporations. In this paper we are going to see such uses of HR Analytics in 5 different organisations and their how the use of HR Analytics helped the organisation as well as the employees in monetary ways and change the business strategy around people - centric way.

Human resource management is focused on the most effective use of people to achieve organizational as well as personal goals. It basically focuses on hiring, managing, exit related functions in the organization. To keep employees fuelled and to keep the productivity rising HR's evaluate employee performance and develop new training programs for them. HR came into light as a specific field in the early 20th century, inspired by Frederick Winslow Taylor (1856–1915). John R. Commons, an American institutional economist, first used

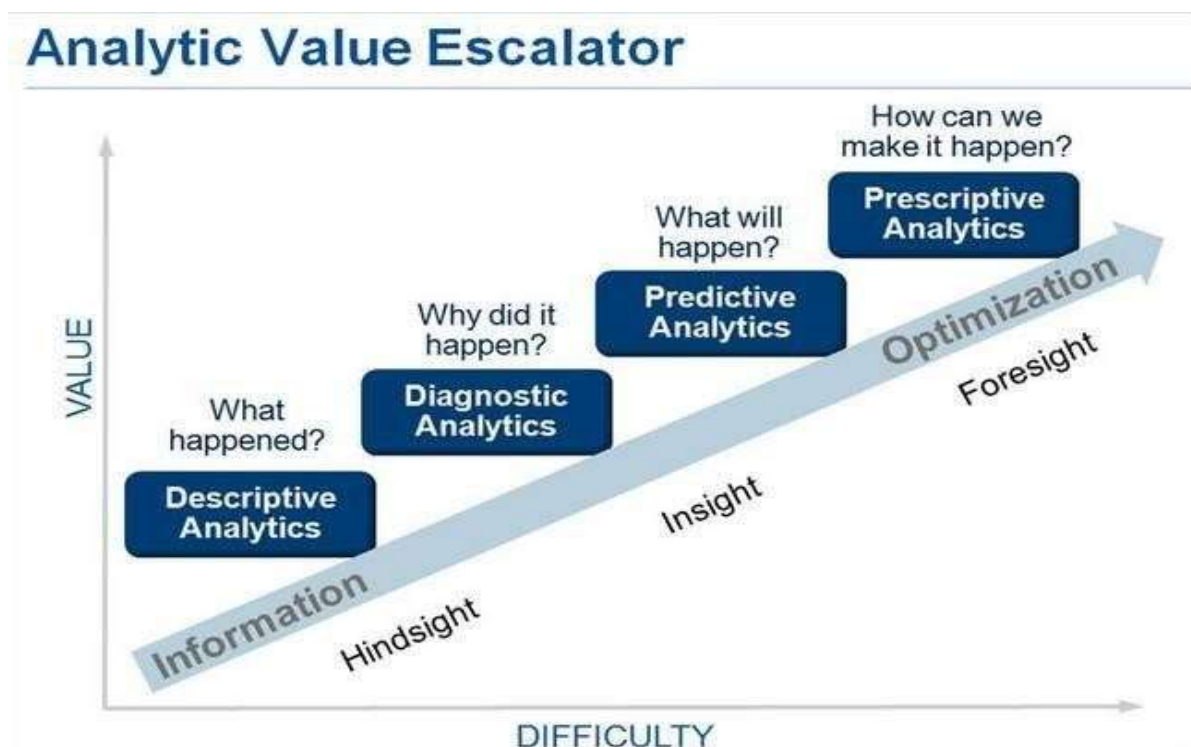
the term "human resource" in his book & "The Distribution of Wealth" that was published in 1893. However, it was not until the 20th century that HR departments were formerly developed to manage the relationships between employers and employees.

Performance Management is an important aspect in Human Resources as it is a continuous communication process between managers and employees to achieve organizational goals as well as develop personnel skills of employees. This entire communication process involves defining clear specific expectations, establishing goals, providing continuous feedback and examining results. Performance Management builds a communication system between a manager and employee that is built throughout the year in hope of accomplishing organizational as well as individual goals. To understand employee managers, go through all the collected data and addresses the performance gaps through the given data. Various tools are used to gather such data like HR Analytics.

HR Analytic is the collection and application of talent data to improve critical talent. It is basically used for decision making using the available data, to predict employee turnover and identify better performers or predict skills that need to be improved. HR Analytics is also known as people analytics. It enables your organization to measure the impact of HR metrics on overall business performances and make decision based on the data.

There are four types of HR Analytics:

1. Descriptive Analytics
2. Diagonostic Analytics
3. Predictive Analytics
4. Prescriptive Analytics



(Figure No.1:Types of HR Analytics)

Descriptive Analytics

Gathering raw data doesn't make sense and isn't always useful, but once it is sorted and put in a systematical order it can be useful. Descriptive analysis (also known as observing and reporting) is the most basic type of analysis and is most likely used. It basically collects all the historical data available summarizes it into something understandable. A headcount of employees in the organization or some specific department would come under Descriptive Analytics. More complicated metrics like turnover rates also come under descriptive analytics as well. They study the past data and aim to explain what happened.

Diagnostic Analytics

If descriptive analytics tells what happened then diagnostic analytics tells you why it happened. We go beyond what is happening to searching for why it is happening. Here you make an observation identify the descriptive analysis and move forward with the diagnostic analysis. Diagnostic analytics uses various techniques including data drilling and data mining. To investigate the root causes of problems and find their solutions companies need to understand why the problems are occurring.

Predictive Analytics

As Descriptive analytics relies on the past data or looks backwards Predictive analytics looks forward. Different statistical models and forecasts are used in these analytics to predict what could happen. The goal of this analysis to find the needs of the organization. Models are built on the patterns that were found on descriptive analytics. It could help predict how long the employee is going to last in the organization, or it can help the talent acquisition team determine if the employee is a good cultural fit for the organizations

Prescriptive Analytics

After the future is predicted, the next question is what can be done about the situation. Prescriptive Analytics provides recommendations on what to do based on the prediction and the old data given. This analysis is most useful for organizational with seasonal demand. For e.g.: A retailer would want to know how many people to staff during the holidays. Prescriptive analytics could also help determine how to properly hire a new employee based on the required skills, and knowledge and across the employee lifecycle. Here you take all the information available on the above levels and prescribe what should be done. The data itself tells you what should happen further.

There are various professional HR Analytical tools used in today's organization like Visier, Tableau, QLIK, SPSS, Microsoft Excel.

Benefits of HR Analytics

- a) HR analytics through its predictive analytics helps in exposing the defective practices that turns out to be the key cause for attrition, which helps in retaining and maintaining high performing employees.
- b) It helps displaying the results and how they were accomplished.
- c) HR analytics help in Human resource planning.
- d) It helps forecasting about employee needs and skill-set for achieving organizational objectives.
- e) It helps in sourcing the best potential organizational talent requirement for specific positions without bias.
- f) It helps in getting better performance results in organization through quality decisions especially in talent acquisition.
- g) It helps in pointing out important performance part which may have high impact on the organizational performance.
- h) HR analytics tools often included at a visualization and automation so you can automatically identify areas of weakness and plan the skills required of the team frame a program for the skills required.

Literature Review

- Dr. P. Raghunadha Reddy, P. Lakshmi Keerthi (2017), in their research paper entitled "HR Analytics' - An Effective Evidence Based HRM Tool" they found that Human resource is prime value to an organization a need to be focused more. According to them evidence- based approach is the best way for an organization to make decisions, and HR Analytics not only helps with that but also provokes organizations to maintain quality data to justify ROI in HR investments.
- Anshu Sharma, Tanuja Sharma, (2017), in their research paper entitled "HR analytics and performance appraisal system: A conceptual framework for employee performance improvement" they found that the role of HR analytics on PA system and its impact on employee's willingness to improve performance by proposing a conceptual model. Here the HR analytics was used as a solution by which they increased the accuracy in the appraisal process with the use of professional data analysis tools. Along with other assumptions for researchers in the field of performance management, this paper also suggested different directions for future research to further improve this field.
- R. Anita. Dr. N. Sumathi (2019), in their research paper entitled "A study on the measuring the factors of HR analytics on performances management in services sector of selected companies in Chennai" they found

how performance management system influences employee performance. And how could the different stages in performance management system change employee performance respectively. The first objective is to review performance management system and employee performance, also the relationship between them. The second objective is to analyse performance management system and their connection to employee performance based on the WERS2004 dataset. The last objective is to find out the nature of the relationship between performance management system and employee performance and to develop a set of recommendations.

- H.H.D.P.J. Opatha (2020), in their research paper entitled "HR Analytics: A Literature Review and New Conceptual Model" they found that HR analytics provides a data-driven framework for solving workforce problems through analysing data with a combination of software and methods that applies statistical models and provides new insights for smarter decision making that allow manager to optimize human resource management.
- Muhammad Said, Dr. Imran Khan, Dr. Filza Hameed (2021) in their research paper entitled "The impact of performance management system on employees' performance" they found that the management of any organization should change their performance management system practices to make them more continuous. It is suggested that management should analyse and consider the problems of employees, and identify them and help the employees in confronting them like a united team. Organizations should use acknowledgment methods which will make employees more encouraged and motivated when they will have sense recognition. As a result of their efforts being appreciated and recognized employees try to achieve the required objectives. The organizations should involve the employees in the goal setting and reward employees for their effort in completion of their goal.

"The dynamic of today's workplace has shifted dramatically, leaving many organizations on their heels," said Alex Clemente, Managing Director of HBR Analytics Services. "Our report found that while people typically represent the largest expense within an organization, most organizations are unable to connect these people investments with business outcomes—and, more specifically, understand how to manage workforce effectiveness to drive profitable growth for the business. Meeting this challenge should be the focus of every modern organization, particularly given the uncertainty in the economy and the labor market."

HR Analytics drives organizational transformation

In the recent research conducted by McKinsey on how businesses can best organize for the future, it is indicated that future-ready companies exhibit three defining characteristics: a clear sense of identity and purpose, a strong focus on agility and simplicity, and a commitment to growth through learning and innovation.

Imagine: What will be the role of HR in the transformation of these three central points? How significant would the impact of HR analytics be when linked with and contributing to the nine imperatives that stem from these characteristics, namely: purpose, culture, value, decision-making, structure, talent, learning, platform, and ecosystem?

HR analytics can help align the workforce with the organization's mission by identifying committed employees who excel not only in their technical skills but also embody the company's purpose. HR analytics come into play to parse, measure, and compare various data points, including performance evaluations, project involvement, leadership behavior, and employee engagement ratings. This data-driven approach enables organizations to select and nurture employees who share a similar level of commitment to the company's mission, paving the way for the achievement of their broader vision.

People analytics is increasingly being used to measure and understand the abstract concept of culture. How do firms tangibly demonstrate the effect of organizational culture on revenue or financial performance? What are the factors within an employee's journey that have a positive effect on their productivity? How do managers determine which employee pulse survey results to address first?

HR analytics can recognize trends and patterns in key cultural factors such as collaboration, employee engagement, employee retention, and customer satisfaction. By extracting these insights, firms can identify and develop strategies to enhance their organizational culture leading to increased revenue growth. Analytics tools can pinpoint areas for improvement, enabling HR, coaches, and leaders to implement targeted programs to foster a more inclusive and positive culture.

Several methods exist through which talent and structure can benefit from the contributions of HR analytics. By understanding the elements that influence employee turnover, productivity, engagement, and satisfaction,

organizations can design and implement effective interventions to retain and motivate their talent. HR analytics can also help automate certain HR processes, thus freeing up HR professionals to focus on more strategic initiatives, such as talent development and retention.

HR analytics and employee learning and development are interdependent forces driving professional growth, upskilling, and engagement. Analysis of employee performance data, competencies, and learning preferences informs customized learning journeys for employees.

Backed by real-world examples and emerging trends, the rise of HR analytics promises to transform talent management and set new benchmarks for organizational excellence.

HR analytics in action

Due to the acceleration of digital transformation, HR departments have increasingly embraced the utilization of workforce data for making evidence-based decisions in recruitment and selection, performance evaluation, diversity and inclusion, and workforce planning. This practice of leveraging workforce data to augment decision-making has been synonymously termed by scholars as HR analytics, people analytics, talent analytics, human capital analytics, and workforce analytics. Regardless of the terminology used, both in academia and practice, there's a shared understanding of the strategic significance of HR analytics. It equips organizations with data, information, and insights to make well-informed, evidence-based decisions effectively.

In their study 'An Evidence-Based Review of HR Analytics,' Marler and Boudreau (2017) defined HR analytics as "an HR practice enabled by information technology that uses descriptive, visual, and statistical analyses of data related to HR processes, human capital, organizational performance, and external economic benchmarks to establish business impact and enable data-driven decision-making."

HR analytics involves gathering, cleaning, investigating, and interpreting this data, particularly data related to HR metrics and KPIs, including employee productivity, turnover rate, absenteeism rate, customer service ratings, employee satisfaction ratings, training completion rates, diversity metrics, and compensation structure efficiency. These are just a few examples of measures that can directly shape business outcomes.

In her 2018 article published in the Human Resource Management journal, Dana Minbaeva argued that developing a human capital analytics framework as an organizational capability requires working with its three critical dimensions: high quality, analytical competence, and strategic ability to act. She also advised that performance-led HR is the future, and human capital analytics "is one vehicle that could bring you into the future."

HR practitioners with an analytics skillset don't make changes solely based on speculation; they provide organizations with data-backed insights. Similarly, businesses that embrace a data-driven approach deliver more accurate judgments. Strategic comes into play when insights trigger actions and are acted upon.

The HR function has the potential to emerge as a leader in analytics. HR analytics not only enhances HR as a field but also elevates it to a function of strategic significance.

Data Analysis

The different measures were conducted based on model such as like correlation, regression, factor analysis and structural equation modeling for the defined hypothesis. The following table shows descriptive measures of data.

Table 1. Descriptive Statistics

	Gender	Engagement Level	Maturity Levels	Output Levels
N	Female 13%			
	Male 87%			
Mean	Female 3.80	4.09		3.30
	Male 3.79	4.03		3.28
Standard deviation	Female 0.572	0.452		0.290
	Male 0.435	0.452		0.226
Shapiro-Wilk W	Female 0.958	0.938		0.942
	Male 0.924	0.943		0.966
Shapiro-Wilk p	Female 0.749	0.501		0.550
	Male < .001	0.003		0.058

Out of 80, 13% are female and 87% are male respondents. Both male and female respondents are said their

organizations' HR concentrating on HR analytics to measure the engagement levels and how it helps to improve employees' output levels.

Table 2.One-Way ANOVA (Welch's)

	F	df1	df2	p
Engagement Level	3.97	1	72.00	0.050
Maturity Levels	4.84	1	41.30	0.034
Output Levels	11.63	1	54.20	0.001

Table – 2 shows variance among various variables such as engagement levels with the p-value of <0.5, maturity levels of HR analytics with p-value of <0.5 and output levels of employees and its p-value is also <0.5. The ANOVA results in no much variance among variables.

Table 3.Correlation Matrix

		Engagement Level	Maturity Levels	Output Levels
Engagement Level	Pearson's r	—		
	p-value	—		
	Spearman's rho	—		
	p-value	—		
Maturity Levels	Pearson's r	0.511	—	
	p-value	< .001	—	
	Spearman's rho	0.652	—	
	p-value	< .001	—	
Output Levels	Pearson's r	0.113	0.370	—
	p-value	0.317	< .001	—
	Spearman's rho	0.219	0.320	—
	p-value	0.051	0.004	—

Form the Table – 3 of correlation matrix defined the correlation between engagement levels, HR analytics maturity levels and employees' output levels. The results shows that the p-values are less than 0.1 and the employee engagement levels and maturity levels are positively related with the value of 0.5 and maturity levels and output levels with the value of 0.4 and engagement and output levels with the value of 0.31 are positively correlated. So, the defined hypothesis "*Employee engagement efforts will be positively associated with effective HR analytics*" is true.

Conclusion

HR analytics and other unrecognized organizational methods that are related with HR analytics are ignored by many organizations. The study focuses on how HR practices could be used to change traditional roles to transformational roles in organizations. The study tries to explore and understand the role of analytics in this modern era. Increase of expectation in performance has put the focus on HR Analytics to create a new innovative and competitive world at work. To execute the role effectively, HR managers and leaders need considerable support from their organizational leaders. First, they need to be able to go in-depth of the problem. These problems can come from various issues and experts in the areas such as change in management, leadership development, staffing and metrics, and HR Analytics, can help analyse the situation and provide possible solutions for these problems.

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