

#### THE INCORPORATION OF HR METRICS IN HR MANAGEMENT: A THEORETICAL FRAMEWORK WITH A SPECIFIC FOCUS ON INDIAN CORPORATE ORGANIZATIONS

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#### ABSTRACT:

The strategic importance of Human Resource Management (HRM) to top management leaders is underscored by the emergence of human resource analytics as a new trend and challenge in the business context. This paper delves into the expansive application of HR metrics in diverse fields, showcasing their growing significance and impact. This paper endeavours to achieve the following objectives: 1) providing a comprehensive understanding of the meaning and significance of HR analytics, 2) elucidating the application of HR metrics, and 3) proposing a novel HR analytics model including various Metrics. A thorough examination of the literature was undertaken to realize the specified objectives outlined in the paper. This study is primarily conceptual, encompassing aspects such as definitions, significance, processes, models, and challenges within the domain of HR analytics. HR analytics entails the utilization of research designs and sophisticated statistical methodologies to systematically assess HR data, derive informed solutions, and make well-founded decisions concerning HR-related issues. Numerous scholars have underscored the substantial impact of HR analytics on the attainment of a competitive edge for organizations.

KEYWORDS- Workforce analytics, Recruitmentanalytics, Performance Analytics

#### Introduction

In the present context of VUCA World, the language of every business is numbers. It has been a challenge to quantify HR functions in the field of Human Resources, as the focus has historically been on quality rather than quantity.Human resource metrics are numerical measures utilized to evaluate the efficiency and effectiveness of diverse HR practices within an organization.HR analytics is an essential process that involves collecting and analysing Human Resource (HR) data to enhance the performance of an organization's workforce. It is also known as talent analytics, people analytics, or workforce analytics. This data analysis method involves correlating the routinely collected HR data with HR and organizational objectives to provide evidence of how HR initiatives contribute to the organization's goals and strategies. The insights gained from HR analytics help organizations identify areas for improvement and plan more effectively for the future. By data-backed leveraging evidence. organizations can confidently focus on implementing necessary improvements and strategizing for future initiatives. The ability to decisively answer critical organizational questions without guesswork has led many businesses to utilize HR analytics to attribute performance enhancement to HR initiatives.



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HR analytics applies statistical models to get insights into employee data and this makes managers possible to predict employee behavioral patterns like attrition rates, training and employee contribution costs, (Mohammed. 2019). Mohammed (2019) explains, "A typical HR Analytics System collects employee data from HRIS (Human Resources Information System), business performance records, mobile applications, and social media merges into a data warehouse, applies big data, statistical analysis and data mining techniques to provide an understanding of hidden data patterns, relations, probabilities, and forecasting. A Data Warehousing System deals with the data collection, analysis, and transformation and storing data on various databases".

HR Metrics leverage the power of data and help in data-driven decision-making that drives better outcomes for the company and its employees. These metrics span across the different stages of the talent life cycle in the today's organization. In fast-paced environment, sustainability and benchmarking are key challenges for every organization. The HR department confidently takes the lead in implementing HR metrics across the organization.

#### Literature review

In this paper, HR-related outcomes are examined, including HR impact and strategic influence (King, 2016), the operational effectiveness of HR function (Walford-Wright and Scott-Jackson, 2018), enhanced HR processes (Stanley, 2014), employee learning (Hicks, 2018), credibility and professional legitimacy of HR (Belizón and Kieran, 2022), improved HR professionals' job performance (Kryscynski et al., 2018), accuracy, fairness, and employee commitment (Sharma and Sharma, 2017), a just workplace (Hamilton and Davison, 2022), and effective HRM (Hamilton and Davison, 2022). An enhanced decision-making process and better overall decisions, whether they are HR- or businessrelated, are among the HRA results that are frequently cited in both groups. The outcome that has been discussed the most in the reviews. Better decision-making generally, whether it be about business or HR, is one of the HRA results that is frequently cited in both groups. In the reviewed literature, this is the result that is most commonly reported. Dataand evidence-based, objective, strategic, and successful judgments are the better ones (e.g. Boudreau and Cascio, 2017; Lunsford and Phillips, 2018).

#### Importance of HR analytics

HR Analytical strategies play a key role in sustainable creating a company bv harmonizing social, environmental, and economic aspects for both immediate and future considerations (Kirtane, 2015). According to Ben-Gal (2018), HR analytics aims to achieve several objectives: 1) to collect and manage data effectively for forecasting short and long-term trends in employee supply and demand across various sectors and job roles; 2) to assist multinational companies in making informed decisions about optimal recruitment; 3) to foster and keep a skilled workforce; 4) to offer insights to companies for managing their workforce efficiently to meet business objectives swiftly and effectively; and 5) to support the successful execution of a company's strategies. Furthermore, the primary goal of HR analytics is to improve a company's sustainability by making smart HR-related decisions based on the analysis of collected data in a meaningful manner through the application of analytical



> A peer reviewed international journal ISSN: 2457-0362

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methods to boost the company's performance. According to Kiran et al. (2018); Bhattacharyya (2017); Kirtane (2015); Reena et al. (2019); Reddy and Lakshmikeerthi (2017); Fred and Kinange (2015), the benefits of HR analytics are

HR analytics offers а multitude of organizational benefits, including enhanced employee and organizational performance, as well as a higher return on investment for human resources. It facilitates the assessment of workforce requirements, forecasts future HR trends. identifies factors impacting employee satisfaction and productivity, and supports effective training and development initiatives. Furthermore, it aids in rational measures decision-making, the financial impact of HR practices, and helps identify individuals who align with the organization's culture. By predicting employees who can be upskilled and quantifying their impact on business outcomes, HR analytics enhances the credibility of HR professionals and enables them to play a more strategic role in organizational discussions. Ultimately, it helps justify investments in human capital and holds HR departments accountable for their impact on the bottom line. Reddy and Lakshmikeerthi (2017) emphasize the importance of evidencebased HR (EBHR) in the decision-making process for adding value to business decisions. EBHR involves managers understanding the relationship between people management practices and business outcomes, such as organizational profitability, customer satisfaction, and quality improvement, through the use of the best available scientific evidence and business information. Kiran et al. (2018) define HR analytics as providing a data-driven framework for resolving business problems using available information to drive new insights. It is about making smart decisions,

delivered through a combination of software, hardware, and methodologies that apply statistical models to work-related data, allowing business leaders to optimize human resource management. Kiran et al. (2018) also found that HR analytics tools are widely used by HR executives for making strategic decisions for the organization, while non-HR executives use these tools for effective decision-making to some extent.

#### **Data-Driven decision**

(Chib, 2019) - Decision makers can use the dashboard to easily and strikingly identify the current status of key HR metrics. The dashboard enables HR professionals to create visual presentations based on the conclusions and insights obtained from analyzing a large amount of data. This allows all managers to quickly comprehend the information conveyed through the charts and tables. Due to its interactive nature, the HR dashboard is an effective tool for reporting and presentations. Jabir et al. (2019) - HR analytics involves analyzing and comprehending the reasons behind events, generating alerts about the next best course of action, and making predictions about the best and worst possible outcomes based on the analyzed data. UweHohgrewe, the lead faculty for Northeastern's Master of Professional Studies in Analytics program. explains that "humans observe the information in front of us and use our intelligence to make conclusions. Machines lack intelligence, but we can make them seem intelligent by providing them with the right information and technology" (2020).Kathleen Egger, who Northeastern's College lectures in of Professional Studies Master of Science in Human Resources Management program, states that human resources now involves more than just administrative tasks. It's about



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comprehending how the business operates to provide advice on optimal practices for the future (2020).

According to Carl Zangerl (2020), the traditional role of HR is evolving rapidly. In many organizations, the HR team is now expected to be a business partner with a specialized focus on deploying, training, engaging, and maximizing productivity from their employees (2020).

## Application of HR metrics for HR related outcome

The HR dashboard is an invaluable tool that presents key HR metrics simply and dramatically, facilitating graphical presentations that allow decision-makers and managers to comprehend information at a glance. Its interactive nature makes it an effective tool reporting for and presentations.(Chib, 2019).

#### .Recruitment metrics

Recruitment Metrics Recruitment metrics help organizations in the following ways: • evaluate and streamline the process of recruitment in an organization, • track the hiring success, since the right selection can help generate the optimal ROI, and • gather recruitment and selection data through the recruitment and selection tracker

| Recruitment             | HR metrics     |
|-------------------------|----------------|
| effectiveness           |                |
| Identify the time gap   | Time to hire   |
| between the moment a    |                |
| candidate is approached |                |
| and the moment they     |                |
| accept the offer.       |                |
| It shows the percentage | Source of hire |
| of overall hires who    |                |

| entered the pipeline       |   |
|----------------------------|---|
| from each recruiting       |   |
| channel or source. For     |   |
| example, if a total hired  |   |
| 20 people have been in     |   |
| the past six months        |   |
| from external sources.     |   |
| On analyzing the data,     |   |
| find that 8 of them        |   |
| were referred (40%), 6     |   |
| applied through job        |   |
| portals (30%), 2 were      |   |
| contacted through          |   |
| direct sourcing efforts    |   |
| (10%) and 4 came from      |   |
| campus placements          |   |
| (20%). This data can be    |   |
| used to plan subsequent    |   |
| hiring efforts.            |   |
| It measures the number     | First-year attrition                    |
| of employees who           | , i i i i i i i i i i i i i i i i i i i |
| leave the organization     |   |
| within their first year of |   |
| work. Candidates           |   |
| who leave in their first   |   |
| year of work fail to       |   |
| become fully               |   |
| productive and usually     |   |
| cost a lot of              |   |
| money to the               |   |
| organization               |   |
| It measures how well       | Quality of hire                         |
| your recruiting process    |   |
| selects the correct        |   |
| people                     |   |
| It measures the cost-      | Cost per hire                           |
| effectiveness and          | 1                                       |
| efficiency of your         |   |
| recruiting process. It is  |   |
| calculated using the       |   |
| following formula:         |   |
| Cost-Per-Hire =            |   |
|                            |   |

Volume 14, Issue 12, Dec 2024



> A peer reviewed international journal ISSN: 2457-0362

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| (internal recruiting cost |  |  |  |
|---------------------------|--|--|--|
| + external recruiting     |  |  |  |
| cost)/ total number of    |  |  |  |
| hires in a given time     |  |  |  |
| frame                     |  |  |  |

#### **Performance Metrics**

| It objectively measures    | The number of   |
|----------------------------|-----------------|
| (production/output)        |                 |
| u i,                       | errors          |
| quality by calculating the |                 |
| number of                  |                 |
| product/service-related    |                 |
| errors per employee or     |                 |
| team.                      |                 |
| It represents the          | Net promoter    |
| willingness of a client to | score:          |
| recommend a company's      |                 |
| service to other potential |                 |
| clients.                   |                 |
| This metric evaluates the  | The number of   |
| number of units produced   | units produced: |
| in a particular period.    |                 |
| These metrics include      | Employee KPI    |
| average handling time,     | metrics         |
| which is the average time  |                 |
| the customer is on the     |                 |
| phone, including when      |                 |
| they are on hold, and      |                 |
| first-call resolution,     |                 |
| which is the number of     |                 |
| callers whose problem is   |                 |
| resolved the first time    |                 |
| they called                |                 |

#### **Compensation Metrics**

Compensation metrics are the tools you use to measure, analyze, and decide how effective your compensation practices and policies are and what you can do to improve them. They help you understand how pay is distributed across your team, so you can make informed

| (internal recruiting cost |  |  |  |
|---------------------------|--|--|--|
| + external recruiting     |  |  |  |
| cost)/ total number of    |  |  |  |
| hires in a given time     |  |  |  |
| frame                     |  |  |  |

#### **Training and Development Metrics**

Training evaluation metrics are specific, quantifiable criteria used to measure an organization's training development or program's effectiveness.

| This can be measured    | Learner feedback    |
|-------------------------|---------------------|
| after achieving a good  | details             |
| completion rate. The    |                     |
| completion rate shows   |                     |
| how many employees      |                     |
| have completed the      |                     |
| training program. It    |                     |
| indicates the level of  |                     |
| learner engagement,     |                     |
| motivation, and         |                     |
| participation.          |                     |
| This metric provides    | Training cost per   |
| the details of the      | employee:           |
| expenses on talent      | 1 2                 |
| development. Here,      |                     |
| the total training cost |                     |
| is divided by           |                     |
| headcount training      |                     |
| This metric is          | Learner performance |
| necessary to            | and progress data:  |
| objectively assess the  |                     |
| performance of a        |                     |
| participant as a result |                     |
| of the training         |                     |
| imparted.               |                     |
| This metric represents  | Total joined YTD    |
| basic data regarding    | (year till date):   |
| the number of           |                     |





In Science & Technology A peer reviewed international journal ISSN: 2457-0362

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concerning the revenue. revenue factor

decisions that will help you attract and keep employees.

|                            | ou unuer una neep | concerning the revenue.     |                   |
|----------------------------|-------------------|-----------------------------|-------------------|
| employees.                 |                   | In other words, it          |                   |
| This metric compares the   | Market index      | compares the amount of      |                   |
| internal job pay relative  |                   | money a company spends      |                   |
| to market-paid rates for   |                   | on paying its employees     |                   |
| external benchmark jobs    |                   | to the amount of money      |                   |
| in your industry.          |                   | it makes in net sales. It   |                   |
| It measures the            | Compa ratio       | can be calculated by the    |                   |
| relationship between the   | _                 | following formula:          |                   |
| salary of an employee (or  |                   | Compensation revenue        |                   |
| a position) and the        |                   | factor =                    |                   |
| midpoint of the pay range  |                   | compensation/revenue        |                   |
| for that employee (or      |                   | It gives the percentage of  | Percent over      |
| position). Therefore, if   |                   | employees over the          | salary range      |
| someone is earning the     |                   | salary range maximum. A     | sonn y ronge      |
| exact amount of the        |                   | salary range is an amount   |                   |
| midpoint of their salary   |                   | that the organization has   |                   |
| range, their compa-ratio   |                   | available to pay a new      |                   |
| will be 1.0 (or 100%).     |                   | employee, and what          |                   |
| Anything less than 1.0     |                   |                             |                   |
|                            |                   | current employees can       |                   |
|                            |                   | expect to earn in a         |                   |
| earning less than the      |                   | specific position. A salary |                   |
| midpoint. Anything more    |                   | range includes a            |                   |
| than 1.0 means they are    |                   | minimum, mid-point, and     |                   |
| earning more than the      |                   | maximum salary. For         |                   |
| midpoint.                  |                   | example, if the salary      |                   |
| It illustrates the average | Market ratio      | range is INR 30,000 -       |                   |
| market-paid rate for each  |                   | INR 40,000, then the        |                   |
| grade relative to the      |                   | salary minimum is           |                   |
| salary range midpoint.     |                   | 30,000, the salary          |                   |
| This metric represents     | Average           | maximum is 40,000 and       |                   |
| the average                | compensation per  | the mid-point is 35,000.    |                   |
| compensation paid to all   | employee          | Compensation tends to       | The ratio of      |
| full-time equivalent       |                   | be one of the top five      | compensation cost |
| employees. It is           |                   | costs for any               | to profit         |
| calculated using the       |                   | organization. Hence, to     |                   |
| formula: Average           |                   | monitor and control the     |                   |
| compensation per           |                   | cost of compensation, the   |                   |
| employee = total           |                   | ratio of compensation       |                   |
| compensation paid          |                   | and the total profit is     |                   |
| out/total headcount.       |                   | calculated. For example,    |                   |
| It depicts employees' pay  | Compensation      | for a given period, the     |                   |
|                            |                   | total compensation costs    |                   |
|                            |                   | 1                           | 1                 |



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| are INR 25,00,000. For    |                  |
|---------------------------|------------------|
| that same period, net     |                  |
| profits are INR           |                  |
| 50,00,000. This implies   |                  |
| that the compensation to  |                  |
| profit ratio =            |                  |
| 25,00,000/50,00,000 =     |                  |
| 0.5 or 50%.               |                  |
| It is the ratio of base   | Compensation mix |
| salary and target         |                  |
| incentives that makes up  |                  |
| total compensation. For   |                  |
| example, an 80/20         |                  |
| compensation mix means    |                  |
| that 80% of               |                  |
| compensation is fixed     |                  |
| base salary, and 40% of   |                  |
| compensation is a target- |                  |
| based incentive (TI), or  |                  |
| variable pay.             |                  |
|                           |                  |

## HR ANALYTICS FRAMEWORK AND PREDICTIVE ANALYSIS

Mohammed (2019) has developed a modern tool for predictive decision making which explains that HR data relating to employee performance, attrition. recruitment and training, etc. are analyzed through the use of HR analytics tools or statistical tools. As a result, based on the analyzed data predictive decisions can be made about employee attrition, performance, recruitment and training, etc. This model was designed effective the relevance of considering decision-making for organizational success and the progress of success.

LAMP Framework

The Right Logic" Rational Talent Strategy (Competitive Advantage, Talent Proot Points) The Right Logic Change



#### Source: <u>Wayne F Cascio</u>, <u>John Boudreau</u>, Investing in People: Financial Impact of Human Resource Initiatives, 2nd Edition

This framework defines a more complete measurement system. The logic element of any measurement system focuses on the 'insights' behind the connections between the numbers and the effects and possible outcomes. Analysis of the logic correctly helps the organization to make strategic decisions. The information gathered by the HR professional needs to be thoroughly analyzed through AI-enabled techniques for the smooth functioning of HR Activities. Each area of HR has different measures, hence sufficient time and attention is paid to enhancing the quality of HR measures, based on criteria such as timelines. completeness, reliability. and consistency.Effective measurement systems must fit within a change management process that reflects principles of learning and knowledge transfer.

It is believed that these components contribute to drive the organizational effectiveness and efficiency (Bhattacharyya, 2017)

Ivan Andreev, Demand Generation & Capture Strategist, Valamis(2024) Predictive Analytics employs statistical methodologies, algorithms, and machine learning to discern patterns in

Volume 14, Issue 12, Dec 2024



A peer reviewed international journal ISSN: 2457-0362 www.ijarst.in

and forecast future behaviors. data As organizations face mounting pressure to demonstrate return on investment (ROI) from their learning analytics implementations, a mere display of learners' performance and interaction with learning content no longer suffices. There is a growing need to transcend descriptive analytics and gain insights into the efficacy of training initiatives and avenues for enhancement. By drawing from historical and current data, Predictive Analytics generates prognostications about future occurrences. This capability to pinpoint potential risks or opportunities empowers businesses to enact proactive measures aimed at enhancing future learning endeavors.

#### A NEW MODEL FOR HR ANALYTICS EMPHASIZING HR METRICS

In 2024, HR analytics is crucial for driving data-driven decisions, enhancing workforce and optimizing employee management, engagement. This model shows leveraging HR metrics in advanced analytics,HR can predict trends, improve talent acquisition, and personalize development plans, leading to increasedproductivity andretention. As businesses navigate hybrid work models and skill shortages, HR analytics provides the insights needed to adopt strategies, ensure diversity and inclusion, and maintain a competitive edge in a rapidly evolving global market.

# (A NOVEL FRAMEWORK FOR HRANALYTICSEMPLOYINGMETRICS)Source- (compiled by author)

Analyzing and interpreting the data related to the above model to derive insights and actionable conclusions.

#### 1) DESCRIPTIVE ANALYTICS

**Descriptive** analysis helps in understanding the data by providing insights into patterns and trends.

**Time to hire** in recruitment measures the average time taken to fill the position. This metric helps to plan the hiring better and also serves as a warning when the hiring process takes too long. If less time is taken to fill it shows the effectiveness of the recruitment process.

| JOB ID | DATE OPENED      | DAT  | DAY  |
|--------|------------------|------|------|
|        |                  | Е    | S TO |
|        |                  | FILE | FILL |
|        |                  | D    | ED   |
| 1      | 1-01-2024        | 15-  | 14   |
|        |                  | 01-  |      |
|        |                  | 2024 |      |
| 11     | 5-01-2024        | 20-  | 15   |
|        |                  | 01-  |      |
|        |                  | 2024 |      |
| 1      | 10-01-2024       | 25-  | 15   |
|        |                  | 01-  |      |
|        |                  | 2015 |      |
| AVERA  | 14+15+15/3=14.67 |      | ·    |
| GE     | DAYS             |      |      |
| TIME   |                  |      |      |

**Cost of hire** Calculates the total cost involved in hiring a new employee.By using descriptive analysis, the company can gain a clear understanding of the total cost required for recruiting several candidates.

| NO OF                  | INTERNAL    | EXTERNAL     |
|------------------------|-------------|--------------|
| HIRE=10                | COST        | COST         |
| COST PER               | Salaries of | Job          |
| HIRE=TOTA              | RE=TOTA the |              |
| L IN                   | recruitment | fees-4000    |
| ETERNAL tea-5000       |             | Recruitment  |
| COST+TOTA Administrati |             | agency fees- |
| L                      | ve expenses | 6000-        |



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A peer reviewed international journal ISSN: 2457-0362

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| EXTERNAL           | office        | Background    |  |
|--------------------|---------------|---------------|--|
| COST/NO            | supplies,     | check costs-  |  |
| OF HIRE=           | rent)-15000   | 6000          |  |
| <u>50000+30000</u> | Employee      | Travel        |  |
| 10                 | referral      | expenses for  |  |
| =8000              | bonuses-      | candidates800 |  |
| COST PER           | 10000         | 0             |  |
| HIRE IS 8000       | Training and  | Relocation    |  |
|                    | development   | expenses-     |  |
|                    | costs for the | 6000          |  |
|                    | recruitment   | Total-30000   |  |
|                    | team-20000    |               |  |
|                    | TOTAL-        |               |  |
|                    | Rs.50000      |               |  |
|                    |               |               |  |

This metric helps to understand the efficiency of the hiring process and make informed budgeting decisions.

**Employee Turnover Rate:** Tracks the rate at which employees leave the organization, by using the formula = number of exits/average head count\*100.which can be useful for planning training programs, succession planning, and other HR activities.

#### 2) DIAGNOSTIC ANALYSIS

**Diagnostic analysis** is used to understand the reasons behind specific outcomes or

trends. Metrics The absence rate measures the percentage of time an employee is away from It helps employers understand work. absenteeism and address related issues. diagnostic analysis helps identify the root causes of absenteeism and variations in Net Promoter Score (NPS). For absenteeism, it examines factors like job satisfaction, work environment, and health issues to understand why employees are frequently absent. In the context of NPS, diagnostic analysis explores customer feedback, service quality, and product issues to determine why customers are promoters, passives, or detractors.

#### Absenteeism rate

Occasional absences are normal, but chronic absenteeism can impact productivity and morale. Employers can use the absence rate to identify patterns and make informed decisions to improve workplace systems

**The Employee Net Promoter Score (NPS)** is a metric used to assess employee loyalty and satisfaction within an organization. It is based on a single question: "On a scale of 0 to 10, how likely are you to recommend our company as a place to work?



A peer reviewed international journal ISSN: 2457-0362

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| Gather  | Categories Respondents  | Calculate NPS   | Interpretation   |
|---|---|---|--|
| information   | Total-100   |   |  |
| Employees<br>respond to the<br>question, rating<br>their likelihood<br>to recommend<br>the company. | Promoters(Score 9-<br>10): These employees are<br>enthusiastic and loyal.<br>Passives (Score 7-8): They<br>are satisfied but not as<br>enthusiastic.<br>Detractors (Score 0-<br>6): These employees are<br>unhappy or dissatisfied. | rs)×100<br>60 are promoters<br>(score 9-10)<br>20 are passives (score<br>7-8) | indicates more<br>promoters than<br>detractors.<br>A high eNPS |
| Employee diversit   | y ratioThese ratios provide   | %   | (80/100  |

insights into the representation of different groups within the workforce. That diversity extends beyond gender and can include other dimensions like ethnicity, age, and more Organizations can use them to track progress

×100)=12.5% Inclusion Metrics: Assesses the sense of belonging and inclusion felt by employees from diverse backgrounds.

| Organizations can use them to track progress |                        |                       |                      |
|--|------------------------|-----------------------|----------------------|
| and promote inclusivity.                     |                        | <b>Promotion Rate</b> | ERG(Employee         |
|  |                        |                       | resource group       |
| <b>Employee Diversity</b>                    | Ethnic Diversity       |                       | participation rate   |
| Ratio for Women                              | Ratio                  | An organization with  | For an organization  |
| the organization has 100                     | organization has       | 500 employees. In a   | with 1000 employees, |
| employees, with 40 of                        | 200 employees,         | given year, 50        | ERG participation is |
| them being women                             | with 30 of them        | employees received    | 20 In a given year,  |
| (40/100×100)=40%                             | being from diverse     | promotions.           | (20/1000×100)=20%    |
|  | ethnic                 | (50/500×100)=10%      |                      |
|  | backgrounds.           |                       |                      |
|  | (30/100×100)=15        | <b>Retention Rate</b> | Employee             |
|  | %                      | company with 200      | Accessibility rate   |
|  |                        | employees             |                      |
| Age Diversity Ratio                          | Disability             | remaining170 at the   | company with 50      |
|  | <b>Diversity Ratio</b> | end,30 left during    | facilities. After    |
| organization has 150                         | organization with      | that                  | conducting an audit, |
| employees, with 50 of                        | 80 employees, out      | period.170/200*100=   | you find that 40 of  |
| them being under 30                          | of which 10 have       | 85%                   | these facilities are |
| years old.Under                              | disclosed              |                       | accessible to        |
| 30=(30/150×100)=33.33                        | disabilities.          |                       | employees.40/50*100  |

Volume 14, Issue 12, Dec 2024

In Science & Technology

A peer reviewed international journal ISSN: 2457-0362 www.ijarst.in

=80%

#### **3) PREDICTIVE ANALYTICS**

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**Predictive Analytics**:Predictive analytics can significantly enhance the quality of hire by providing data-driven insights throughout the recruitment process.A predictive model scores candidates based on their likelihood of high performance, helping recruiters focus on the most promising applicants.predictive analytics can help improve retention rates, which is a key component of quality of hire.identify candidates with a higher likelihood of longterm retention, allowing recruiters to prioritize these individuals.

**Quality of Hire**: This is a metric used to evaluate the value that new hires bring to a company. It typically combines several indicators to provide a comprehensive assessment.

#### **Key Indicators:**

| Calculation(Individual  |                                      |
|---|--------------------------------------|
| Performance. Out of 100   |                                      |
| . Performance   | Average= quality of                  |
| Rating (PR): How  | hire=(80+85+90/3)=85                 |
| well the new hire   |                                      |
| performs in their   |                                      |
| role.80   |                                      |
| 1010.000  |                                      |
| Hiring Manager  | average quality of the               |
| Satisfaction  | new hire is 85 out of                |
| (TIMC), The   |                                      |
| (HMS): The  | 100, indicating a                    |
| satisfaction level of   | 100, indicating a high-quality hire. |
| ` '   |                                      |
| satisfaction level of   |                                      |
| satisfaction level of<br>the hiring manager   |                                      |
| satisfaction level of<br>the hiring manager<br>with the new hire.85   |                                      |
| satisfactionlevelofthehiringmanagerwith the new hire.85RetentionRate  |                                      |
| satisfaction level of<br>the hiring manager<br>with the new hire.85<br><b>Retention Rate</b><br>( <b>RR</b> ): Whether the                            |                                      |
| satisfaction level of<br>the hiring manager<br>with the new hire.85<br><b>Retention Rate</b><br>( <b>RR</b> ): Whether the<br>new hire stays with the |                                      |
| satisfactionlevelofthehiringmanagerwith the new hire.85RetentionRate(RR):Whetherthenew hire stays with thecompanyforafora                             |                                      |

Flight Risk Analysis: A company wants to identify employees who are at high risk of leaving within the next six months. Data has been collected on various factors that might influence an employee's decision to leave. Identify key variables that influence turnover, such as:

Performance Rating(PR)75(out of 100), EngagementScore(ES)60(out of 100), Salary Increase (SI) 5% (normalized to 0.05), Promotion History (PH): 1 (indicating one promotion)Absenteeism (A): 10 days (normalized to 0.1). Using a logistic regression model, the following are coefficients for each feature: Intercept (b0): -1.5, Performance **(b1):** -0.02, Engagement Rating Score **(b2):** -0.03, Salary Increase (b3): -1.2, Promotion History (b4): -0.5, Absenteeism (b5): 2.0

The logistic regression equation is used to predict the probability of an event happening. In this case, the equation is: Logit(p) = b0 + b1\* PR + b2 \* ES + b3 \* SI + b4 \* PH + b5 \* A. By plugging in the given values, we get: Logit(p) = -1.5 + (-0.02 \* 75) + (-0.03 \* 60) +(-1.2 \* 0.05) + (-0.5 \* 1) + (2.0 \* 0.1), which equals -5.16. To find the probability from the logit, we use the logistic function:  $p = 1 / (1 + e^{-100}Logit(p))$ . Therefore,  $p = 1 / (1 + e^{-100}Logit(p))$ .

#### Interpretation:

**Low Risk:** A probability close to 0 indicates a low risk of leaving.

**High Risk:** A probability close to 1 indicates a high risk of leaving. By identifying employees with high flight risk scores, the company can take proactive measures to retain valuable talent.



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#### 4) PRESCRIPTIVE ANALYTICS

**Prescriptive Analytics**:Prescriptive analysis within the realm of training effectiveness involves the utilization of data to propose specific actions aimed at enhancing training programs. This analytical approach discerns the most effective training methods and provides

recommendations for refinement. When applied to succession planning, prescriptive analysis serves to identify potential leaders and devise tailored development plans designed to prepare them for future roles. This methodology strategic ensures the establishment of a robust leadership pipeline aligning training and development bv initiatives with the organizational requisites. strategic Through the utilization of prescriptive analytics, organizations can make well-founded decisions that serve to optimize both employee growth and business outcomes. Effectiveness: Training Recommends

training programs based on performance data to improve skills and productivity.One common method is the **Kirkpatrick Model**, which evaluates training on four levels: Reaction, Learning, Behavior, and Results.

| REAC  | LEARNING | BEHA  | RESU   |
|-------|----------|-------|--------|
| TION( | (41.67%) | VIOU  | LT     |
| 90%)  |          | R     | (Sales |
|       |          | (70%) | Increa |
|       |          |       | se:(20 |
|       |          |       | %)     |
|       |          |       |        |

| Survey   | Pre-test Score:          | Obser   | Before  |
|----------|--------------------------|---------|---------|
| Result   | Average 60%              | vation  | Traini  |
| s: 90%   | Post-test Score:         | :70%    | ng:     |
| of       | Average 85%              | of      | 500,00  |
| particip | Learning Gain=           | partici | 0/mont  |
| ants     | Posttest Score(8         | pants   | h       |
| rated    | 5)–Pre-                  | used    | AfterT  |
| the      | test Score(60)           | new     | rainin  |
| trainin  | /pre-test                | techni  | g:      |
| g as     | $score(60) \times 100 =$ | ques    | 600,00  |
| "very    | 41.67%                   | in      | 0/mont  |
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| "        |                          | sales   | Effecti |
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|          |                          |         | 500000  |
|          |                          |         | )       |
|          |                          |         | ×100=   |
|          |                          |         | 20%     |
|          |                          |         |         |
|          |                          |         |         |

The above data presents a compelling demonstration of the quantifiable measurement of training effectiveness across various key performance indicators. This comprehensive assessment affords a nuanced understanding of its implications

**Succession Planning**: Provides strategies for developing internal talent to fill key positions in the future.succession planning rate of employees can be calculated using several key metrics. Here are some common ones,



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| Percentage of Critical<br>Positions Filled<br>Internally=Total  | Pipeline Utilization<br>rateTotal Positions<br>Filled: 50 Positions   |  |
|---|---|--|
| Critical  | Filled from   |  |
| <b>Positions: 20 Critical</b>   | Pipeline: 30  |  |
| Positions Filled  |   |  |
| Internally: 15  |   |  |
| Critical position filled<br>internally/total critical<br>position*100=15/20*1<br>00=75%<br>75% of the critical<br>positions were filled<br>internally, indicating a<br>strong internal talent<br>pipeline and effective<br>succession planning. | Position filled from<br>pipeline/total<br>position<br>filled*100=30/50*10<br>0=60%<br>The Pipeline<br>Utilization Rate is<br>60%, indicating that<br>60% of the positions<br>were filled using<br>internal candidates |  |
|   | from the talent pipeline.   |  |

These metrics help understand the effectiveness of your succession planning efforts and identify areas for improvement

#### **Challenges of HR analytics**

HR analytics can be incredibly powerful, but there are several challenges that organizations often face when implementing and utilizing these tools effectively:

**Data Quality and Integration**: HR data often comes from multiple sources and systems, making it difficult to ensure consistency and accuracy.

**Data Privacy and Security**: Handling sensitive employee data requires strict adherence to privacy laws and regulations.

Lack of Analytical Skills: Many HR professionals may not have the necessary skills to analyze and interpret complex data

**Cultural Resistance**: There can be resistance to adopting data-driven approaches within the HR department or the organization as a whole. **Defining Relevant Metrics**: Identifying which metrics are most relevant to the organization's goals and objectives can be difficult.

**ROI Measurement**: Demonstrating the return on investment (ROI) of HR analytics initiatives can be challenging.

#### CONCLUSION

HR analytics is the practice of interpreting data patterns to make informed decisions and enhance overall performance. By utilizing HR metrics such as time to hire, retention rates, and employee satisfaction, organizations can effectively assess the success of their HR practices. Through in-depth analysis of these metrics, HR analytics offers valuable insights into workforce trends, helps pinpoint areas for facilitates improvement. and strategic planning. This data-driven approach enables organizations to optimize their HR processes, boost employee engagement, and ensure that HR strategies are aligned with business objectives.

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