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HR DATA ANALYTICS IN THE TIME OF THE COVID-19 PANDEMIC

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ABSTRACT

We are now residing in an era that can be labelled as the Era of Analytics. HR Analytics is now playing a vital role in aligning all the business processes towards achievement of strategic goals in order to have a competitive advantage. Additionally, globalization of business has escalated motion of employees in the organization and there is cultural amalgamation on social and corporate levels. Hence there is a shift on the talent war, where HR plays a pivotal role in human-capital analytics for business decision making. This would result in changes in recruitment practices across the organizations throughout the world to acquire fresh talents, better decision- making capacity by the help of work force analytics. This paper focuses on recruitment and attrition analytics by utilizing data-driven metrics and acumen to upgrade the sourcing of the best candidates for different profiles within the organization and understanding the reasons for gradual loss of employees over time and how to retain them in the organization. Due to pandemic COVID-19, organizations have been scrapping interviews. It is to be expected that 60-65 per cent interviews would get dropped or delayed due to lockdown in many parts of the world and people are encouraged to stay at home to curb the spread of the virus. This will witness an adverse impact in the short term with interviews getting postponed, especially in the services sector, following the slowdown across industries triggered by the coronavirus pandemic. Subsequently due to coronavirus pandemic there is severe economic slowdown so organizations have opted for work from home using technologies. So, HR Analytics plays an important role in retaining employees and improving ROI.

Keywords: HR Analytics, Recruitment metrics, Attrition metrics, Workforce Analytics, Human Capital Analytics

I. INTRODUCTION

HR analytics is the utilization of statistics, modelling, and analysis of employee-related factors to boost the business outcomes. HR analytics can also be attributed to:

- People analytics
- Talent analytics
- Work force analytics

The below graph provided by Google Trends shows search interest for these terms since 2004. Both the terms HR analytics and People analytics have developed and become prevalent over the years and continue to gain interest. HR Analytics deals with analysing the data related to HR department. Work force Analytics is related to other departments like, Customer relationship, Research and Development, Sales, Advertising and Branding. HR analytics empowers HR professionals by utilizing data-driven metrics and acumen to upgrade the sourcing of the best candidates for different

profiles within the organization and retain them. It facilitates leaders to make decisions to create better work environments and maximize employee productivity. It has a major impact on the bottom-line when used effectively.

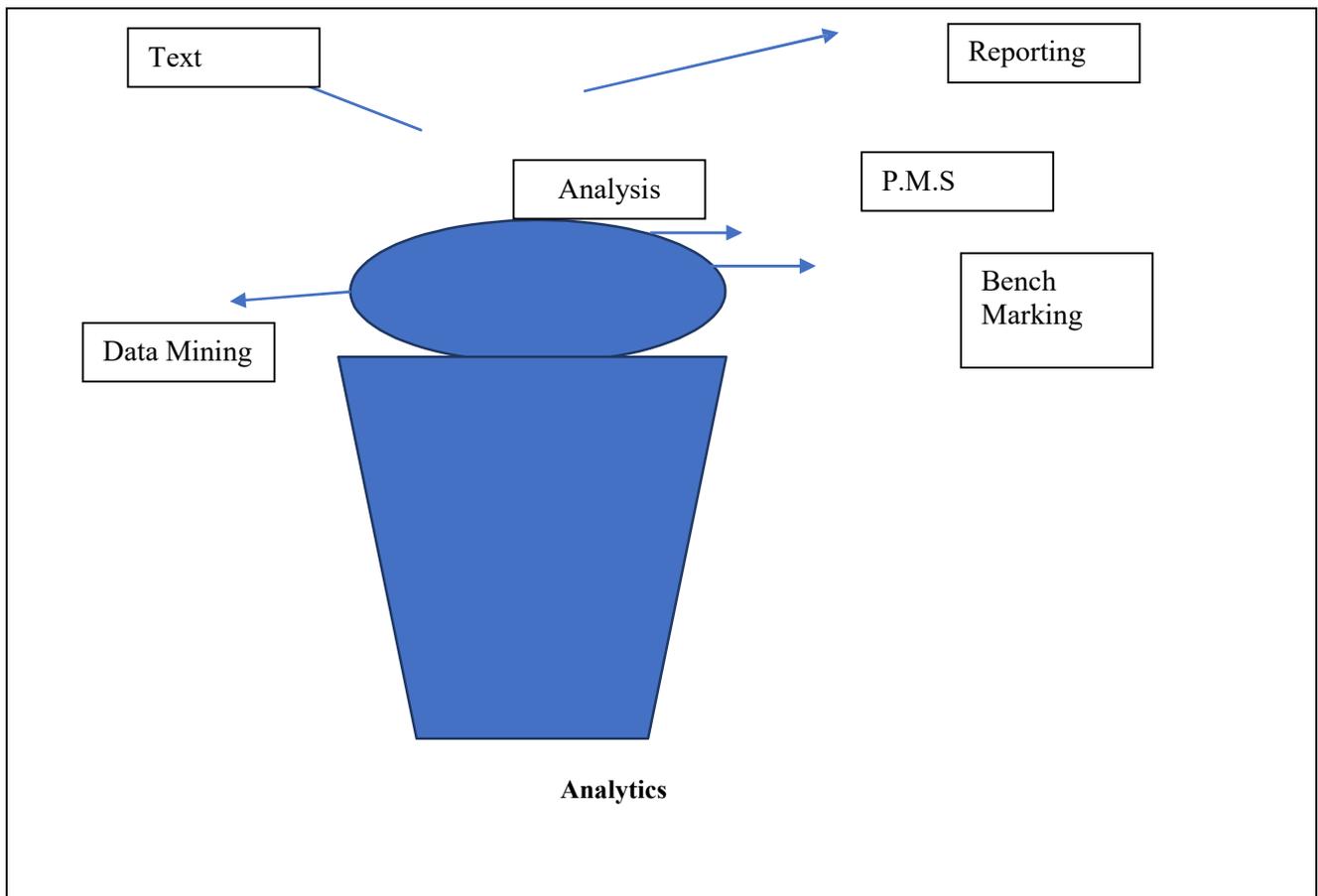
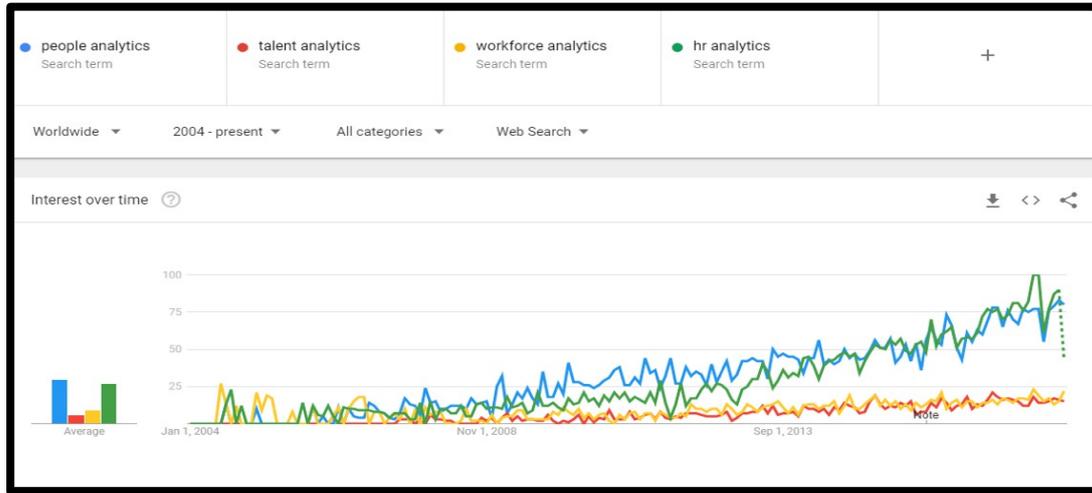
Source: microstrategy.com/us/resources;

*Google Trends data starts from 2004.

Google Trends description: Numbers represent search interest relative to the highest point on the chart for the given region and time.

HR professionals gather data points across the organization from sources like:

- Employee surveys
- Telemetric Data
- Attendance records
- Multi-rater reviews
- Salary and promotion history
- Employee work history
- Demographic data
- Personality/temperament data
- Recruitment process
- Employee databases



II. EVOLUTION

- Value – Impact / Business Contribution
V/S Time Period
- Welfare Officer: 2nd Industrial
revolution
- Labour Manager: Bridge between
Management and Labour: World Wars
- Personnel Management: Admin jobs,
Recruitment, Legal Compliances
- HRM: Support function, Proactive,
Employee engagement : Globalization
- Strategic HRM: Takes responsibilities of
entire HR function. They work with the
management very closely to improve the
business process. Business HR is
responsible to make the decision of
strategy of management.

HR department is evolving and has transformed itself from traditional support function to more strategic and data driven one. HR Analytics is the use of statistics, modeling and analysis of employee related factors to improve business outcomes and emancipate HRA professionals to make data driven decisions to get the right talent and retain successful workforce. The various benefits of HR Analytics may include boosting of ROI, employee retention and enhance business processes.

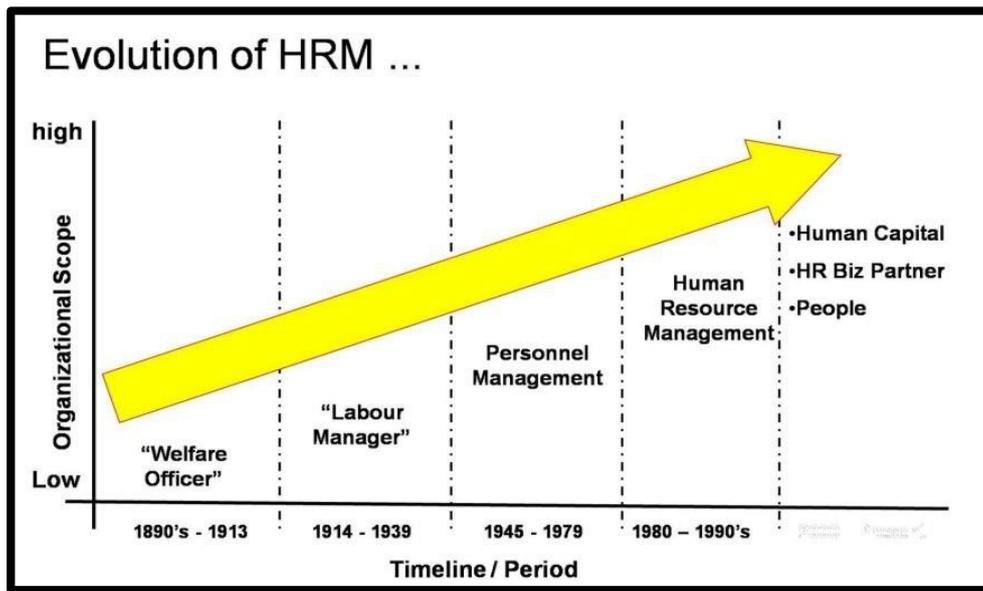
The Future of Hiring: In the era of Analytics post covid-19 the hiring of best talent increases and the organization should become more acrobatic in order to maintain its pool of talent. They need to focus on

work force planning and need to determine their hiring needs as per their budgets to have success in the near future.

IMPORTANCE OF HR ANALYTICS

Traditionally the main role of recruiters was to fill up the vacancies as per the requirements. Organization these days understands the importance of workforce as a result there is a shift in focus towards acquiring the best talent available in the market.

As the job seekers are always on the search of better opportunities, so the talent acquisition team job should look into not only filling up the vacant positions, find the right fit for the organization and also to retain them. There are various HR tools and technologies which has given recruiters data driven recruitment through HR Analytics. Ex: Applicant tracking system and Recruitment Management System.



Data Collection:

- **Collecting the right data:**

The candidate’s database for various job openings can be segregated in terms of years of experience, age and qualification. These data can be amalgamated as per the profile

requirements. The recruiters can add values to candidates’ profile from their social media accounts like LinkedIn.

- **Data cleansing:**

After the data is collected then the next step is cleansing the data as per the job profile.

The resumes of a candidate are sorted as per the job analysis of the particular position in order to remove any misfit.

- **Re-Engagement:**

The candidate's profiles might be missed after the job posting is closed. By the help of Analytics it helps to re-engage those candidates as per the forthcoming vacancies of the organization.

- **Attrition Analytics:**

Various parameters like age, income, satisfaction level, years at the company will help in letting us know how many employees are in a look out of change. This analysis can be used as preventive measures to retain the employees

- **Workforce Forecasting:**

With the help of predictive analytics, we can predict the future job market as per the economic condition. A survey by MIT and IBM reported that organizations with the high level of analytics had 8% higher sales growth, 24% higher operating income and 58% higher sales per employee.

Analytics allows for enhanced processes that improve human aptitude and efficiency.

Source: emptrack.com

MAJOR TOOLS OF HR ANALYTICS

SAP

EXCEL (Using pivot tables, graphs)

POWER BI: Visualized Dashboard

PYTHON

RTOOLS

TABLEAU: Business Analytics SPSS

The main idea behind Employee-Customer Profit Chain theory is higher employee satisfaction will lead to happier customers and increased sales and profitability. The managers should focus on investing in employees training; new technology and it should be linked to performance levels of all employees. The companies who focus on its employees and customers as people and not just means to attain profit are in a position to implement Employee-Customer Profit Chain theory.

CLASSIFYING THE HR DATA

Descriptive Analytics:

Descriptive Analytics describes what already has happened in the past. Identify the problems by studying the past data. In a sales department of the organization a report shows percentage of sales employees that have left the organization in past one year. It can be segregated into business unit or product line.

Diagnostic Analytics:

Diagnostic Analytics represents the causes/reasons revealed by the happening revealed by descriptive analytics. We can rank the reasons as to why Sales department employees departed? It may be due to higher base salary offered by competitors.

Predictive Analytics:

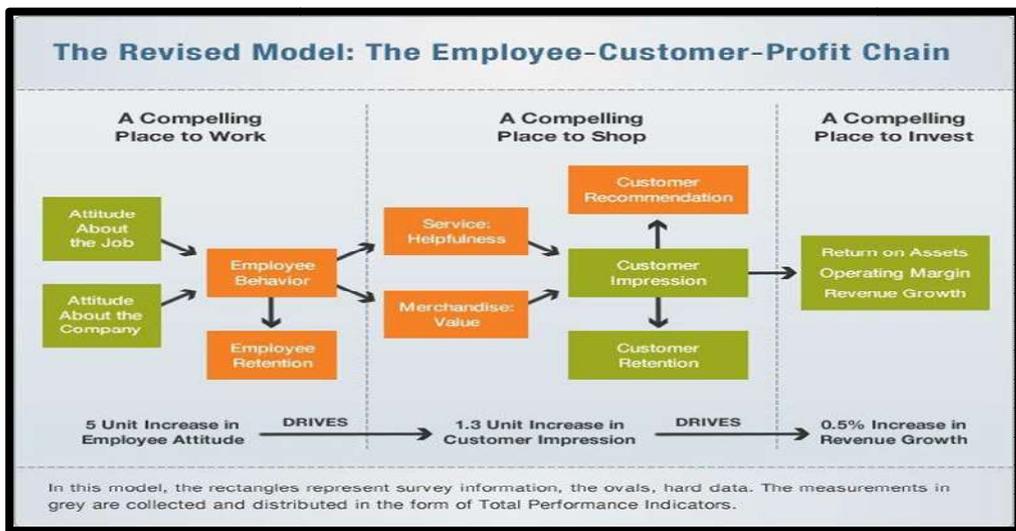
Predictive Analytics tell us what will happen in the future. It predicts the future event based on the past event. If the

forecast is sales employees are going to resign in next 90 days, then we can advise the managers to approach and talk to them before it's too late.

Prescriptive Analytics:

Prescriptive Analytics suggest what we should do next. Here decisions are taken based on the predictions. There is formulation of new strategies to streamline the system or the business processes. The

decision that is taken is completely based on data and is more reliable. If we have sales representatives resigning then prescriptive analytics may suggest a training program to be administered to them before their productivity is likely to decline. HRM will have to migrate from fundamentals of people science (resources) to Strategic HR (Decision taken based on data/information)



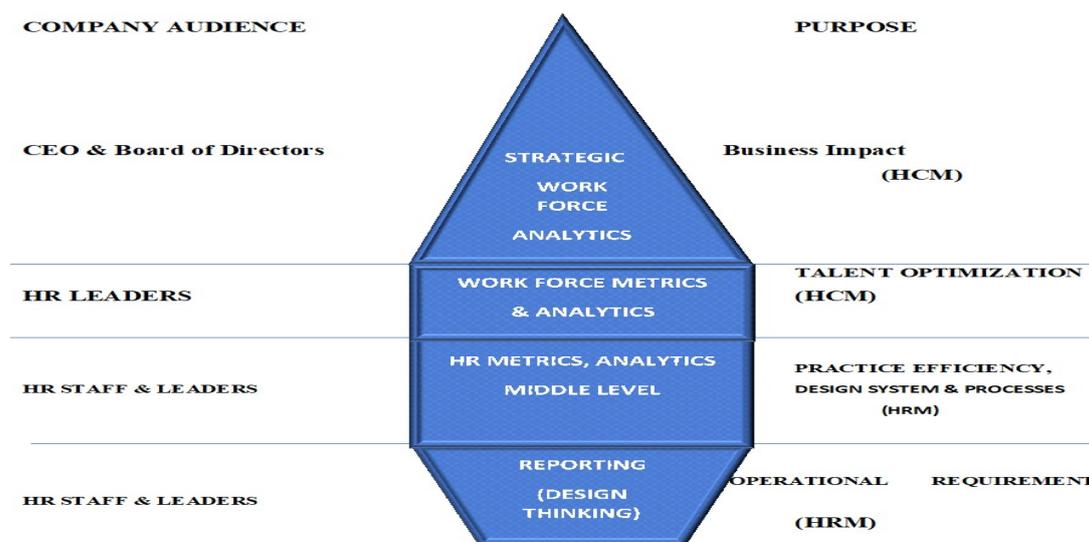
* Source:www.datasynctech.com

III. WORKFORCE ANALYTICS

Workforce analytics is the approach of measuring behaviours of people (candidates, employees) and analysing them to improve people and business performance. This is done by analysing people data using statistical methods and software in order to make better workforce

decisions.

HR Analytics deals with analysing the data related to HR department. Work force Analytics is related to other departments like, Customer relationship, Research and Development, Sales, Advertising and Branding.



Source: analyticsinhr.com/blog

IV. ANALYSING RECRUITMENT METRICS

What Is Recruitment Analytics?

Recruitment analytics is a process of using data-driven metrics and insights to improve the sourcing of the best candidates for different roles within the organization that will help cut costs and better understand factors that are influencing the hiring process.

Recruiting metrics are measurements used to track hiring success and optimize the process of hiring candidates for an organization. When used correctly, these

THE

metrics help to evaluate the recruiting process and whether the company is hiring the right people.

Recruitment Analytics will help to understand different mechanism so that company can create effective recruitment process.

MAJOR RECRUITMENT METRICS: (Identify the health of the recruitment system) RECRUITMENT TRACKER

Source: analyticsinhr.com

1. TIME TO FILL:

Time to fill refers to time taken to hire new candidates and is measured by number of

days between a job posting and hiring a candidate.

- Start Date – Date of Interview
- Start Date – Date of Joining
- 1st interview - Date of Joining

Factors of Evaluation:

Number: 45 days; Number of days between job posting and hiring a candidate. Unit: Days

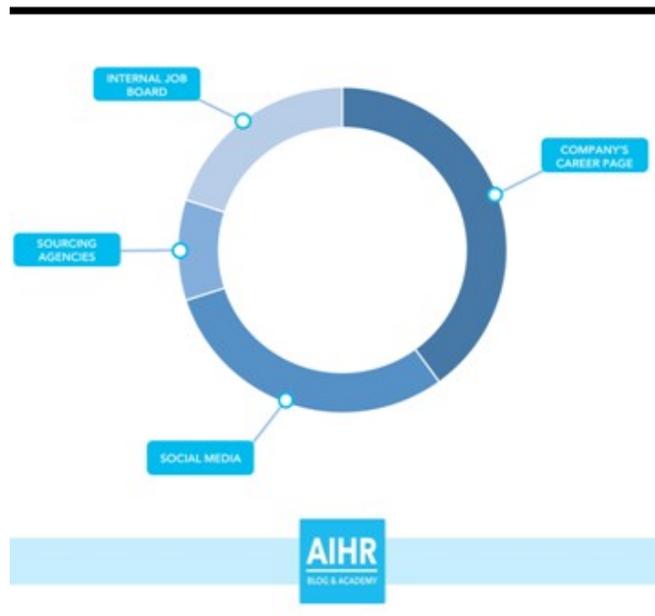
Turn around Time (TAT): Avg. turnaround time: 49 days across department Relation wrt Company’s profit(Y/N): Lesser the

time more the profit: Y Measurable (Y/N): Y

1. Quality of hire:

It indicates the individual who is hired is beneficial for the organization. It measures the performance of the individual during a 6 months / 1-year time period. Low ratings indicate a bad hire and this cost the company a considerable amount of money.

$$\text{Quality of Hire} = (\text{Number of hired candidates considered satisfactory} / \text{Total Number of candidates hired}) * 100$$



Factors of Evaluation:

- Number: ½ year, 1 year; Unit: Year/ Month
- Turn Around Time (TAT): Avg. turnaround time : 6 months / 1 year
- Relation wrt Company’s profit(Y/N) : Lesser the time more the profit: Y (For Good appraisals) Measurable (Y/N): Y

2. Source of hire

We should track the source that attracts new hires to the organization. This metric also traces the most productive source from different recruiting channels. We should focus on sources giving good numbers of hires; Expenditure should be done on that which would save some money.

Factors of Evaluation:

$$Yield\ ratio = \frac{Number\ of\ applicants\ who\ successfully\ competed\ the\ stage}{Total\ number\ of\ applicants\ who\ entered\ this\ stage}$$

Factors of Evaluation:

- Number: candidate (nos.) Unit: Number
- Turn Around Time (TAT): No. of

- Number: Amount (Rs) (Money spent for each source: internal / external) Unit: Rs
- Turn Around Time (TAT): Avg. turnaround time: 1 day to few months till the job opening is valid Relation wrt Company’s profit(Y/N) : Y
- Measurable (Y/N): Y

Employee Referral rate: (Number of rereferrals / Number of Open Jobs) *100

3. Recruitment funnel effectiveness: Yield Ratio

It is a funnel which starts from sourcing of candidates and ends with signed contract. If we measure the effectiveness at each stage of the recruitment funnel, we can get the yield ratio step wise.

- days to get the job opening closed. : 240:1
- Relation wrt Company’s profit(Y/N) : Y
- Measurable (Y/N): Y



4. Cost per hire: Sourcing Channel Cost:

It deals with the costs incurred while hiring an employee. It gives a fair idea as to where

we can cut costs during hiring activity without overlooking the candidate’s quality and experience level.

$$Cost\ per\ hire = \frac{Total\ recruitment\ cost}{Total\ number\ of\ hires} = \frac{Total\ internal\ cost + Total\ external\ cost}{Total\ number\ of\ hires}$$

- Before a financial year budget on recruitment is given by the management to the HR Department. Then HR per year and prescribes.
- Focus on low cost source

- Number : Amount Unit: Rs
- Turn Around Time (TAT): No. of days to get the job opening closed. Relation wrt Company’s profit(Y/N) : Y (When it takes time) Measurable (Y/N): Y

Factors of Evaluation:

TOTAL RECRUITMENT COST	
External cost	Internal cost
Advertising cost	Time spent by recruiter - (avg. wages * hours spent)
Agency fees	Time spent by manager - (avg. wages * hours spent)
Candidate expenses	New hire onboarding time - (avg. wages * hours spent)
New hire training cost	Lost productivity
Other external costs	Other internal costs

5. Applicants per opening:

It refers to the number of job applicants per job opening. If we have large job applicants then it shows high demand for jobs but at the same time it may also indicate that the job description is too wide.

Applicants per opening: (Number of Job Applications / Number of Job Opening)

We need to reduce the job applications by having specific Job description.

Factors of Evaluation:

- Number: candidate (nos.) Unit:

Number

- Turn Around Time (TAT): No. of days to get the applications for the job posting with in the days prescribed in the advertisement:
- Relation wrt Company’s profit(Y/N): Y Measurable (Y/N): Y

6. Offer acceptance rate:

The offer acceptance rate compares the number of candidates who successfully accepted a job offer with the number of candidates who received an offer.

$$\text{Offer acceptance rate (OA)} = \frac{\text{number of offers accepted}}{\text{number of offers made}}$$

Factors of Evaluation:

- Number: candidate (nos.) Unit: Number
- Turn Around Time (TAT): 1 day: No. of days candidates takes to give acceptance to offer after being offered Relation wrt Company's profit(Y/N) : Y Measurable (Y/N): Y

ANALYSING THE ATTRITION METRICS

Attrition in human resources refers to the gradual loss of employees over a period of time. (New hires cannot adjust with organization culture). High attrition is troublesome for companies. HR professionals take a leadership role in formulating company compensation programs, work culture and motivation systems that help the organization retain top employees.

MAJOR ATTRITION METRICS:

Source: analyticsinhr.com

1. Employee Retention:

It refers to strategies used to strategies used to revamp the workplace so that the employees are satisfied, qualified to excel in the current job.

(Total number of employees - number of employees who have departed)/ Total number of employees

2. Gallup Survey Score / Employee Survey Score:

Source: <https://q12.gallup.com/public/en-us/Features>

The Gallup Q12 score represents the average of the scores of 12 items that Gallup has consistently found to measure employee engagement as linked to business outcomes.

Measurement That Means Something:

- Employees answer 12 simple questions, available in over 30 languages including Arabic, Chinese, Spanish, French, German and more that tie directly to performance outcomes.
 - Scores are on a 1 to 5 scale, which clearly highlights strengths and opportunities.
 - Scoring: 1 to 5 point scale statements; 1: Strongly Disagree to 5: Strongly agree. Score between 1 to 3: Not attached to the company.
 - When improvement efforts focus on the essential elements of engagement, those measured by the Q12 survey, team performance
- Gallup Q12 Questions Case:

4. Absenteeism Rate:

Highly motivated and engaged employees take in general fewer sick days (up to 37% less, according to Gallup). Additionally, absent employees are less productive and high absence rates throughout an organization is a key indicator of lower organizational performance.

Absenteeism: $[(\text{Avg no. of employees} * \text{Missed working days}) / \text{Avg. No. of Emp} * \text{Total working days}] * 100$

V. CONCLUSION

In today's scenario the pandemic COVID 19 which came out of the blue has a devastating effect not only on recruitment but also on the economy of the world. Though this may be for a short period but the impact would continue for several years to come.

90 % of companies like TCS, Accenture, Cap Gemini are doing work from home. Companies in sectors like Hospitality, Tourism, FMCG have taken a hit place are likely to witness this delay virtual mode of operating. Sectors like Banking/ Logistics/ Exports will go for virtual work front. Digital Platform companies will as far as campus placement reduction on hiring. It is a worrisome factor as I marketing, digital payments, ecommerce, e learning companies will grow Offers made last year, some of them will be put on hold around 12 months to recover.

Source: ET NOW Webinar on 18 Lease; 2. Hitesh Oberoi: CEO Naukri.com; 3. Tarandeep Singh: CEO Cocubes; 4. Dalmia: Managing Editor ET Now; Source: Daash *et al.*, 2020, J Natural Remedies.

MAJOR CHALLENGES OF HR ANALYTICS IN FUTURE:

- Holding Information: HRIS, LMS (Learning Management System), ATS (Applicant Tracking System) deal with relevant and often current information and deliver high-impact reports to stakeholders.
- Broad Data: Pinpointing on metrics too large to assess. E.g. Voluntary vs. Involuntary Termination statistics. What if the right people are voluntarily leaving and wrong employees are retained?
- Analysis Skills: HR professionals should enhance their analysis skills for professional development Big Data and NOT So Big: Too much of data or less data becomes a problem to make big decisions.

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