A Study on The Role of Data Analytics In Hr Decision Making

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Abstract- *Data Analytics refers to the HR Decision Making activities carried on for the primary purpose of helping workforce of an organization. It is aimed at improving the behaviour and performance of a person by analyzing employee efficiency. In the modern era of globalization, data analytics plays a pivotal role in any given organization. It is aimed at preparing executives to propose appropriate strategies so as to effectively address current business challenges. More than just stimulating the productivity of the firm, a genuine decision making deemed to increase positive impacts. The purpose of this project is to study the Effectiveness of Decision - making processes by the company. The Descriptive Research approach is applied in this study. Random sampling method has been used to collect every respondent's opinion on Decision making. A quantitative research approach of data collection was adopted using a questionnaire This study focused on the effectiveness of the respondents on the basis of Decision Making, Employee Efficiency Planning, Workforce Optimization.*

Keywords- Data Analytics, HR Decision Making, Workforce, Employee Efficiency

I. INTRODUCTION

Data analytics has transformed the way Human Resources (HR) operates in enterprises. HR professionals may now extract important insights from massive amounts of data using new analytical approaches, thereby revolutionizing decision-making processes. Data analytics has a varied function in HR decision-making.

Firstly, data analytics enables HR to make more informed decisions regarding recruitment and talent management. By analyzing factors such as candidate profiles, skills, and performance data, HR can identify patterns that lead to successful hires, optimize recruitment processes, and forecast future talent needs more accurately.

Secondly, data analytics plays a crucial role in employee retention and engagement. By analyzing data related to employee satisfaction, feedback, and performance metrics, HR can pinpoint areas of improvement within the organization and implement targeted strategies to enhance employee experience and reduce turnover rates.

Moreover, data analytics empowers HR to create data-driven strategies for workforce planning and development. Through predictive analytics, HR can forecast future workforce trends, identify skill gaps, and design training programs that align with the organization's strategic goals, ensuring a competent and agile wo
rkforce.

Furthermore, data analytics enables HR to monitor and measure the effectiveness of various HR initiatives and policies. By tracking key performance indicators (KPIs) and metrics such as employee productivity, absenteeism, and diversity ratios, HR can assess the impact of its interventions and make data-driven adjustments to optimize outcomes.

The role of data analytics in HR decision-making is instrumental in driving organizational success by facilitating evidence-based decision-making, enhancing employee experience, and aligning HR strategies with business objectives. By harnessing the power of data, HR professionals can unlock valuable insights that lead to more efficient, effective, and strategic HR practices.

II. REVIEW OF LITERATURE

Dr. Priyanka Kulkarni, Dr. Asmita Namjoshi, and Dr. Minal D. Kalamkar (2024) "Emergence of Talent Analytics in Human Resource Management with Reference to Music and Performing Arts Industry in India"

The study on talent analytics in India's music and performing arts business demonstrates its favorable impact on HR procedures. Despite the advantages in decision-making and recruitment, constraints such as financial investments and skill shortages impede seamless adoption. Training and collaboration can help to overcome these hurdles and maximize the benefits of talent analytics. Future research could look into longitudinal and qualitative analysis to gain a better understanding of talent analytics integration in this area.

MD Rokibul Hasan (2024) "Employee Performance Prediction: An Integrated Approach of Business Analytics and Machine Learning"

The article by Hasan (2024) offers a machine learning and business analytics integrated approach for employee performance prediction. The importance of precise performance forecasting in human resource management is emphasized. Data collection, preprocessing, feature selection, model training, testing, optimization, deployment, and monitoring are all included in the suggested model. Using resources for predictive analytics and related HR data analytics, this study offers businesses insightful information to improve personnel management and resource allocation decisions.

III. RESEARCH GAP

The literature review identifies a research gap in the practical applicability of theoretical models in various organizational settings, indicating a need for future research.The study of data analytics as practice highlights the need for more research on the current state of HR analytics practice and its impact on HR operations.

OBJECTIVES OF THE STUDY

- To enhance the HR decision-making through the implementation of data analytics in employee efficiency planning.
- To study the framework of analyzing HR data which derive actionable insights for workforce optimization.

Research Methodology

Instrumental Design: Five questions were created for each element of the structured questionnaire using Likert's five-point standing system.

Data Collection Method: The study collected primary and secondary data on the variables impacting information collected through company hand and employer through questionnaire.

Study Population: The total population of the companyis 1230.

Sample Size and Sampling Technique: The sample size of the study is 177 respondents. The respondents are employees of the company. The method of easy simple random sampling was employed to gather the data.

Data Analysis: Descriptive analysis were used to assay the data. Chance Analysis is applied to produce a contingency table from the frequence distribution and represent the collected data for better understanding.

Chart Analysis is applied for better understanding of the percentage analysis and it is done via bar charts.

Current data analytics capabilities

Particulars	Frequency	Percentage
Strongly satisfied	114	64.4
Satisfied	50	28.2
Neutral	11	6.2
Dissatisfied	1	0.6
Strongly dissatisfied	1	0.6
Total	**177**	**100.0**

Table. No. 1.1 Current data analytics capabilities

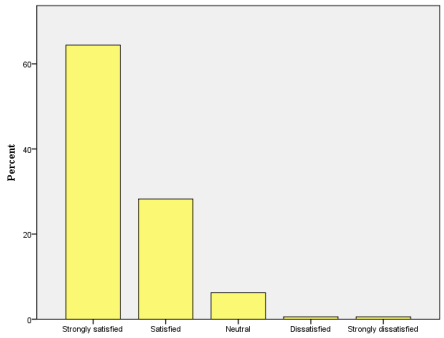

Fig. No. 1.1. Current data analytics capabilities

Inference: From the above table it has been observed that, responders have dissatisfied at 0.56%, neutral at 6.21%, satisfied at 28.25%, strongly dissatisfied at 0.56%, strongly satisfied at 64.41% for organization's current data analytics capabilities for HR decision-making.

Employee efficiency planning

Particulars	Frequency	Percentage
Strongly satisfied	92	52.0
Satisfied	70	39.5
Neutral	13	7.3
Dissatisfied	1	0.6
Strongly dissatisfied	1	0.6
Total	**177**	**100.0**

Table. No. 1.2 Employee efficiency planning

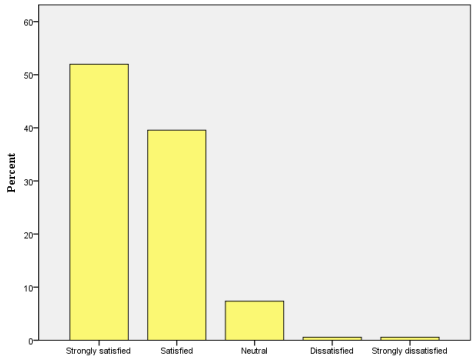

Fig. No. 1.2 Employee efficiency planning

Inference: From the above table it has been observed that, responders have dissatisfied at 0.56%, neutral at 7.34%, satisfied at 39.55%, strongly dissatisfied at 0.56%, strongly satisfied at 51.98% for the level of employee efficiency planning in your organization currently.

Chi – Square Test

Current Capabilities * Employee Efficiency Planning, I was given the opportunity to have a deeper understanding of subject Cross tabulation

Null Hypothesis:

H0: There is no association between Current Capabilities and Employee Efficiency Planning

Alternative Hypothesis:

H1: There is an association between Current Capabilities and Employee Efficiency Planning

Summary of chi-square

Chi-Square Tests			
	Value	**df**	**Asymp. Sig. (2-sided)**
Pearson Chi-Square	412.435[a]	16	.000
Likelihood Ratio	77.202	16	.000
N of Valid Cases	177		
a. 19 cells (76.0%) have expected count less than 5. The minimum expected count is .01.			

Table. No.1.3. Summary of the chi-square

Inference: From table 4.2.4, Value of p=0.000 which is less than 0.05. Null Hypothesis is rejected.

There is an association between Current Capabilities and Employee Efficiency Planning Crosstabulation.

Correlation Analysis

Correlation between, HR data analysis can help in identifying skill gap and continuous improvement in workforce optimization process.

Null Hypothesis:

H0: There is no significant relationship between identifying skill gap andcontinuous improvement in workforce**.**

Alternative Hypothesis:

H1: There is a significant relationship between identifying skill gap and continuous improvement in workforce.

Correlation

Correlations			
		Identifying Skill Gap	Continuous Improvement in Workforce
Identifying Skill Gap	**Pearson Correlation**	1	.633**
	Sig. (2-tailed)		.000
	N	177	177
Continuous Improvement in Workforce	**Pearson Correlation**	.633**	1
	Sig. (2-tailed)	.000	
	N	177	177
****. Correlation is significant at the 0.01 level (2-tailed).**			

Table. No. 1.4 Correlation

Inference: From the table 4.34, r = 0.633 (r value lies between -1 to +1), hence it is clear that there is a positive correlation between Identifying Skill Gap and Continuous Improvement in Workforce (i.e.,) H1 is accepted. There is a significant relationship between Identifying Skill Gap and Continuous Improvement in Workforce.

IV. SUGGESTIONS

- The company must use predictive analytics tools which can ensure that the workforce to proactive in upskilling and ready for future challenges.
- The organisation can increase the employee trust by strengthening data privacy controls and ensuring clear data handling practices.

- They have to focus on continuous development by updating data analytics frequently in different HR activities, such as workforce optimization and employee performance evaluation.
- The company must conduct regular skill gap analyses to employees by using data analytics which will help them to continuous improvement in workforce.

Limitations of the study

- Some of the information given by the respondents may be biased.
- The results may vary from individual to individual.
- The research could not be made more in detail about all the variables due to short duration of thetime.
- Analysis is done on the assumption that respondents have given information through the questionnaire.

V. CONCLUSION

This study is to focus the HR Decision Making activities that are imparted in the organization. This study is conducted by a survey with the help of questionnaire to evaluate the Role of data analytics in HR decision making processes. The study reveals that the integration of data analytics in HR decision making are playing a vital role in this organization. Data analytics is a most required process and the organization should provide adequate employee efficiency planning and workforce optimization helps to their employees for their career growth and for the company's development. New developments and technologies (SAP) are taking place in all the areas of the field; organization may take special initiatives to impart in data analytics in HR decision making on these new developments to help employees cope up with the new technologies. After the analysis of data through the study, I conclude that HR Decision Making processes at the company are at appreciable level.

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