

HR ANALYTICS: A LITERATURE REVIEWS NEW CONCEPTUAL MODEL

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ABSTRACT

The rapid advancement in data analytics has transformed various business functions, including Human Resources (HR). HR analytics has emerged as a critical tool for enhancing decision-making by leveraging data to improve workforce management and organizational performance. This literature review explores the current landscape of HR analytics, focusing on its definitions, applications, benefits, and challenges. Key themes in the literature include predictive analytics, employee retention, talent management, performance evaluation, and diversity and inclusion. HR analytics has emerged as a critical tool for transforming human resource management (HRM) from an operational function into a strategic one. This literature review explores the evolution, current trends, and challenges of HR analytics by examining key studies, methodologies, and frameworks in the field. The review highlights how data-driven decision-making in HR practices, such as recruitment, performance management, employee engagement, and retention, enhances organizational performance.

Keywords: HR Analytics, E-HR Practices

INTRODUCTION

In today's data-driven business environment, the role of Human Resource Management (HRM) has evolved from being a purely administrative function to a strategic partner in achieving organizational goals. HR analytics, also known as people analytics or workforce analytics, plays a pivotal role in this transformation. It involves the systematic collection, analysis, and interpretation of HR data to make informed decisions regarding various aspects of workforce management, such as talent acquisition, employee engagement, performance evaluation, and retention. The advent of advanced technologies, such as artificial intelligence (AI), machine

learning, and big data analytics, has enabled HR departments to shift from intuition-based decision-making to evidence-based strategies. By utilizing HR analytics, organizations can uncover hidden patterns in employee behavior, predict future workforce trends, and optimize their human capital management.

RESEARCH QUESTIONS & OBJECTIVES

What are the key trends and developments in HR analytics over the past decade?

A: This question aims to explore the historical evolution of HR analytics, including its transition from basic reporting to predictive and prescriptive analytics. It

seeks to understand the technological and methodological advancements that have shaped the field.

2. How does HR analytics impact key HR functions such as recruitment, performance management, employee engagement, and retention?

A: This question focuses on the practical applications of HR analytics in core HR processes, examining how data-driven approaches enhance decision-making and improve outcomes in these areas.

3. What are the primary challenges faced by organizations in implementing HR analytics, and how can they be addressed?

A: This seeks to uncover the common barriers, including technical, cultural, and ethical issues, that prevent successful adoption and implementation of HR analytics. It also aims to identify potential solutions for overcoming these obstacles.

METHOD

The study will begin with a systematic literature review, which will serve as the foundation for understanding the current state of HR analytics. The literature review will focus on academic papers, industry reports, and case studies related to HR analytics. The following steps will be taken:

- **Search Strategy:** Relevant academic databases (e.g., Google Scholar, JSTOR, Web of Science) will be searched using keywords such as "HR analytics," "workforce analytics," "people analytics," "predictive analytics in HR," "HR data-driven decision-making," and "HR technology."
- **Inclusion Criteria:** Studies published in peer-reviewed journals, conference papers, and reputable industry reports from the past decade will be included. The review will prioritize research that focuses on the

evolution, tools, applications, and challenges of HR analytics.

- **Data Extraction:** Key information such as research findings, methodologies, applications, and frameworks will be extracted and categorized under themes such as technological trends, HR functions impacted, challenges, and ethical.

LITERATURE REVIEW ON CONCEPTUAL MODEL

A conceptual model serves as a simplified representation of complex systems, aiding understanding and communication across various fields. Historically, these models have evolved from basic diagrams to sophisticated frameworks that capture the intricacies of systems. They can be categorized into descriptive, predictive, and normative models, each serving different purposes. Methodologies for developing and validating these models vary, emphasizing the importance of empirical evidence and expert insights. Applications range from healthcare and business to education, illustrating their versatility. However, challenges such as oversimplification and the dynamic nature of systems persist. Future advancements, particularly in technology, promise to enhance the adaptability and effectiveness of conceptual models in addressing complex issues.

HR ANALYTICS

HR analytics, also known as people analytics or workforce analytics, refers to the use of data analysis techniques to optimize human resource management (HRM) and decision-making processes. It involves collecting, analyzing, and

interpreting HR data to provide insights into various aspects of workforce management, such as recruitment, employee performance, engagement, turnover, and development. By leveraging data, HR analytics helps organizations improve efficiency, enhance employee satisfaction, and align HR strategies with broader business goals.

Key Components of HR Analytics

1. **Data Collection:** HR analytics starts with gathering data from multiple sources, such as employee records, performance management systems, surveys, attendance data, and external sources (e.g., labor market trends). Modern HR systems can integrate data from various platforms to create a centralized data repository.

2. **Data Analysis:** Once the data is collected, analytical techniques such as descriptive analytics, predictive analytics, and prescriptive analytics are applied.

IMPORTANCE OF HR ANALYTICS

HR analytics plays a vital role in transforming traditional human resource management into a more data-driven, strategic function. Here are key reasons why HR analytics is important:

3. **Improved Decision-Making:** HR analytics enables data-driven decisions rather than relying on intuition or guesswork. By analyzing data, HR professionals can make more accurate decisions in recruitment, talent management, and employee engagement, leading to better workforce outcomes.

Employee Retention and Engagement: By analyzing patterns in employee behavior and feedback, HR analytics helps identify

factors that lead to disengagement and turnover. This allows organizations to implement proactive measures to retain talent and improve overall employee satisfaction.

HR ANALYTICS PROCES

HR analytics, also known as people analytics, is the process of gathering, analyzing, and interpreting data related to human resources to make informed business decisions. The process typically involves the follows.

Identifying HR Metrics: The first step in HR analytics process is identifying key metrics that are relevant to the organization's goals. These metrics could include employee turnover rate, retention rate, recruitment cost per hire, etc.

Data Collection: The next step involves collecting data from various sources such as HRIS (Human Resource Information System), surveys, performance evaluations, etc. This data can be both quantitative (e.g., number of employees, salary levels) and qualitative (e.g., employee feedback, performance reviews).

Data Cleaning and Preparation: Once the data is collected, it needs to be cleaned and prepared for analysis. This involves removing duplicates, filling in missing values, and ensuring data accuracy.

Data Analysis: In this step, statistical techniques and data visualization tools are used to analyze the prepared data. This could involve identifying patterns, trends, correlations, and outliers in the data.

Interpreting Results: After the analysis, the HR team interprets the results to derive

actionable insights. These insights can help in understanding employee behavior, identifying areas for improvement, and predicting future trends

POSSIBLE HR QUESTIONS TO BE ANSWERED BY HR ANALYTICS

HR analytics can provide answers to a wide range of important questions that impact workforce management and organizational performance. Here are some examples of questions that HR analytics can address:

Talent Acquisition and Recruitment:

Which recruitment channels are most effective in attracting top talent?

What traits or skills do successful employees in specific roles have in common?

What is the average time-to-hire, and how can it be reduced?

Which candidates are most likely to stay and thrive in the organization?

Employee Retention:

What are the key factors contributing to employee turnover?

Which employees are most at risk of leaving the organization, and why?

What can we do to improve employee retention in critical roles?

How does employee tenure impact company performance or team dynamics?

Employee Engagement and Satisfaction:

What factors drive employee engagement and job satisfaction?

How does employee engagement impact performance and productivity?

NEW MODEL FOR HR ANALYTICS

Derive actionable insights. These insights can help in understanding employee behavior, identifying areas for

improvement, and predicting future trends.

Data Collection and Integration Layer

This layer serves as the foundation of the model, encompassing the collection and integration of data from multiple sources to ensure a comprehensive dataset for analysis.

*** Internal Data Sources:**

- HR management systems (HRIS): Employee records, performance reviews, compensation data.
- Learning and development platforms: Training records, skill assessments.
- Employee engagement surveys: Job satisfaction, feedback data.

*** External Data Sources:**

- Labor market trends: Industry benchmarks, competitive salary data.
- Social media and professional networks: Talent pool analysis, employee sentiment.
- Economic data: Macroeconomic trends affecting labor demand and workforce strategies.

CHALLENGES FOR HR ANALYTICS:

Despite its significant benefits, HR analytics faces several challenges that can hinder its effective implementation and utilization. Understanding these

Challenges are crucial for overcoming them and fully leveraging HR analytics to drive organizational success. Here are some key

challenges:

alignment with organizational strategy, and ethical considerations.

Data Quality and Integration

- **Data Accuracy:** Inaccurate or incomplete data can lead to misleading insights. Ensuring the accuracy and reliability of data collected from various sources is a fundamental challenge.
- **Data Integration:** Combining data from disparate HR systems (e.g., recruitment platforms, performance management systems) can be complex. Integrating data into a unified system that supports comprehensive analysis is often challenging.

Data Privacy and Security

- **Compliance:** Adhering to data protection regulations (e.g., GDPR, CCPA) is essential to avoid legal issues. Ensuring that employee data is handled in compliance with these regulations can be complex.
- **Confidentiality:** Maintaining the confidentiality of sensitive employee information while using data for analytics requires robust security measures and policies

DISCUSSION & CONCLUSION:

HR analytics represents a powerful advancement in human resource management, enabling organizations to make informed, strategic decisions based on data. By leveraging insights from HR analytics, organizations can improve various aspects of HR management, including talent acquisition, employee engagement, performance management, and retention. However, to fully realize the potential of HR analytics, organizations must address several challenges, including data quality and integration, privacy and security, skill gaps, cultural resistance,