



Research on Innovative Strategies of Enterprise Human Resource Management in the Digital Era

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Abstract. With the rapid development of technologies such as big data, cloud computing, and 5G, corporate human resource management has ushered in unprecedented opportunities and challenges for change. By analyzing the changing trends in corporate talent needs in the digital age, the problem is pointed out. Then, the key elements of the digital transformation and innovation strategy of human resource management are further elaborated, and specific strategies for innovation in human resource management in the digital age are proposed. Enterprises must adapt to the development needs of the digital age and use advanced technologies to optimize human resource management to achieve sustainable development.

Keywords: digital age; human resource management; data-driven decision-making

1 Introduction

With the rapid development of big data, cloud computing, ubiquitous networks, and mobile communication technologies such as 5G, human society is gradually entering the digital age of intelligent interconnection. With the advent of the digital age, human resource management in enterprises faces unprecedented opportunities and challenges. Human resource management in enterprises is moving in a digital direction and is continuously undergoing changes and upgrades.

2 Current Status of Enterprise Human Resource Management Reform in the Digital Era

1. Upgrading skills and knowledge

In the big data environment, the first problem that enterprise human resource management needs to solve is the ability and knowledge update of employees. This challenge reflects the demand of HR talents for new technologies and new knowledge to the greatest extent. In the context of the big data era, the traditional HR management model is no longer suitable for enterprises. It places higher demands on HR's basic

knowledge and data analysis capabilities. In order to improve their technical and knowledge levels, they also need to learn new tools and software [1]. In the big data environment, HR management methods are becoming more and more intelligent and complex, which places higher demands on relevant personnel, that is, to be able to quickly learn and efficiently use the various tools they have mastered. This is not only technically, but also psychologically. For those who are accustomed to working with traditional methods, they will feel nervous and confused when they want to adapt to new tools and technologies.

2. Data Integration and Application

In the context of big data, data integration and utilization have become a major problem in enterprise human resource management. With the continuous increase of a large number of data sources inside and outside the enterprise, how to effectively integrate them has become an urgent problem to be solved [2]. The difficulty of data integration is how to integrate data from different departments and systems to ensure the consistency and accuracy of the data. If it is not handled well and the information is inconsistent, it will cause deviations in the analysis results, thus affecting the correctness of the policy. More importantly, how to convert these integrated data into useful behaviors has become a hot topic in current research. It is not enough to have a large amount of information. It is important to analyze the information and apply it to the actual work of the enterprise. Therefore, for many enterprises, it is not only necessary to have strong data analysis capabilities, but also to be able to convert it into executable insights.

3. Resistance to Change

Resistance at the employee level is manifested in their suspicion and lack of adaptability to new technologies and new methods; employees are very dissatisfied with the application of big data analysis, and they are afraid that it will affect their job security, privacy or career development. When people do not have a good understanding of how big data is used to improve productivity and individual development. Management resistance is mainly manifested in the adherence to traditional management methods [3]. Some managers question the significance and efficiency of data analysis, or are unwilling to spend more time and resources to learn and implement data-based management strategies. When making decisions, they often rely on traditional experience and intuition rather than information analysis. Cultural resistance of the enterprise. In some companies, people regard old working methods and procedures as a safe and reliable foundation, but new changes are seen as a source of uncertainty and risk. In such a cultural environment, even management strategies that are beneficial to the development of the enterprise and are formulated based on data analysis will encounter resistance.

4. Ethical and Compliance Issues

In the big data environment, the ethical and compliance issues faced by corporate personnel reforms have become more prominent. There is a problem of information leakage during the collection process. In order to better carry out human resource management, companies will collect a lot of personal information related to them, such as personal health, family situation, work performance, etc. If there is not enough transparency and the employees' consent is not obtained, such data collection will

infringe on the employees' privacy. There is discrimination in the use of information. When companies use big data to make decisions such as employee recruitment and promotion, they often unconsciously establish biases in algorithms or data samples. If past work reports contain gender or racial biases, analysis based on such data will produce similar biases in future employment. About information security and protection [4] .

3 Specific Strategies for Innovation in Human Resource Management in the Digital Era

3.1 Building a Human Resource Demand Forecasting Model

Data is the basis for building a prediction model. Enterprises need to collect a large amount of internal and external data. Internal data includes indicators such as recruitment channels, recruitment cycle, interview pass rate, and employee turnover rate; external data involves economic development trends, industry development conditions, and technological trends. These data can be collected through the enterprise's internal human resources system, public data, surveys, and market analysis. The collected data needs to be analyzed in depth to establish a reliable human resource demand prediction model. Commonly used analysis methods include regression analysis, time series analysis, and decision tree models. Through these methods, the correlation between data can be found and future human resource demand trends can be predicted [5] . For example, regression analysis can establish a relationship model between independent variables (such as company size, industry development trends, and economic growth rate) and dependent variables (human resource demand), thereby more accurately predicting future human resource demand.

After the model is established, it is necessary to verify it with actual data to test the reliability and accuracy of the model. If there is a large deviation between the prediction results of the model and the actual situation, the model needs to be adjusted and optimized. For example, cross-validation, model parameter adjustment and other methods can be used to improve the prediction accuracy of the model. In addition, as the market environment and internal conditions of the enterprise change, the model also needs to be continuously updated and optimized to maintain its effectiveness. In order to improve the accuracy and reliability of the prediction, a multi-model combination method can be used. For example, the regression analysis model is combined with the neural network model to take advantage of their respective advantages to improve the accuracy of the prediction. For example, the study of the enterprise human resource demand forecasting model based on the RBF neural network shows that this combination model can better adapt to the complex and changing market demand.

3.2 Improve the Data-driven Recruitment System

Enterprises should make full use of technologies such as big data and artificial intelligence to build and improve this system from multiple aspects. First, they should

optimize recruitment channels. By collecting data from various channels, such as resume submission volume, interview invitation rate, and employment rate, they should evaluate channel effects and calculate the average cost of each channel, including advertising costs and recruitment personnel input, so as to formulate a reasonable recruitment channel combination strategy and reasonably allocate recruitment budgets. In the talent selection process, they should use keyword screening, data analysis and other technologies to improve the accuracy of resume screening, use structured interviews, behavioral event interviews and other methods combined with data analysis to evaluate the comprehensive quality of candidates, and identify potential risks of candidates through data analysis to provide reference for corporate decision-making [6]. Enterprises should also attach importance to recruitment demand analysis, predict future job talent demand based on the company's business development, find out the reasons for loss through data analysis of resigned employees, provide reference for recruitment strategy adjustment, and reasonably formulate recruitment budgets based on the company's financial situation and recruitment needs. Through these measures, enterprises can more accurately target target groups, improve the coverage and effectiveness of recruitment information, quickly identify suitable candidates, shorten the recruitment cycle, improve the accuracy and satisfaction of recruitment, and gain an advantage for enterprises in the fierce market competition.

3.3 Improve the Digital Human Resource Management Ecosystem

Enterprises should establish standardized data indicators and evaluation systems, clarify key information in various links such as recruitment, training, and performance management, such as candidates' educational background, skill level, work experience, and past performance data, to ensure the objectivity and scientific nature of recruitment decisions. At the same time, enterprises need to build a multi-dimensional data collection and analysis platform, integrate big data technology, accurately identify employee skill gaps and development potential, design targeted training plans, and improve the efficiency of training resource allocation. Enterprises should introduce intelligent performance management, and through real-time data monitoring and feedback mechanisms, realize the transition from annual evaluation to continuous improvement mode, and ensure that performance evaluation is highly consistent with employee career planning and corporate strategic goals [7]. At the organizational level, enterprises need to optimize the organizational structure, create a flat and networked structure suitable for the digital age, encourage employees to develop horizontally, use big data technology to comprehensively evaluate employee capabilities and give corresponding rewards. Enterprises should focus on corporate strategic planning, improve data-driven recruitment systems, dynamically optimize recruitment strategies, and ensure the rationality of resource allocation and maximize investment returns.

3.4 Establish a Sound Performance Appraisal System

In terms of the specific steps of building a performance appraisal system, we must first determine the performance appraisal dimensions. As shown in the PBC performance

management tool, performance appraisal can be divided into multiple dimensions to ensure a comprehensive assessment of employee performance. Secondly, we must formulate data-based performance indicators, clarify the overall performance goals based on the company's strategy and business needs, and break them down into various departments and employees. We must select performance indicators that can quantify employee work results and set challenging and achievable target values for each key performance indicator. At the same time, we must achieve the dynamic and flexible nature of performance management, use digital tools to update employee work data and performance results in real time, and flexibly adjust performance indicators and evaluation criteria based on market changes and corporate strategic goals.

Strengthening the application of performance results is also an important part of establishing a sound performance appraisal system. By providing transparent performance feedback through digital platforms, employees can understand their performance and make corresponding improvements. Based on the performance evaluation results, optimize the allocation of human resources and assign outstanding employees to more important positions to maximize their value [8]. At the same time, formulate personalized incentive measures such as bonuses, promotions, training opportunities, etc. based on employees' performance and personal development needs to stimulate employees' work enthusiasm and creativity and improve the overall performance of the enterprise. Finally, it is necessary to continuously improve and optimize the performance management system, regularly evaluate the effectiveness of existing indicators, and make necessary adjustments and optimizations to performance indicators based on evaluation results and actual conditions to ensure the accuracy and effectiveness of performance management. Through these measures, enterprises can continuously improve their performance management level and operational efficiency, laying a solid foundation for the sustainable development of enterprises.

3.5 Implement a personalized talent training mechanism

Enterprises should have a deep understanding of employees' personal interests, career planning and work needs, and on this basis, establish an effective feedback mechanism for employees, management and other parties, so that they can play a greater role in the evaluation. Through the online education platform, the company can provide employees with a large amount of course resources and teaching information. Employees can freely choose courses according to their actual situation. Such a personalized learning method can not only meet the different needs of employees, but also mobilize students' learning enthusiasm and initiative. At the same time, the company can also improve the training content and methods according to the actual situation of the trainees, so as to achieve the purpose of improving the training effect.

When implementing a personalized talent training mechanism, enterprises should also build a talent evaluation system with innovation ability, quality, effectiveness and contribution as the core, abandon unscientific and unreasonable evaluation shackles, and conduct detailed classification evaluation of talents based on real ability and work performance. Improve the incentive mechanism that is conducive to tapping the potential of talents, further deepen the reform of the wage system, establish a wage system

with innovation orientation and balanced protection, ensure the combination of income and contribution, improve the honor and reward system for talents, and create a social environment that encourages innovation and tolerates failure. Only in this way can enterprises continuously improve the overall quality and creativity of employees and lay a solid talent guarantee for the sustainable development of enterprises.

4 Conclusion

In short, in a digital environment, the human resource management of an enterprise must have a scientific understanding of the latest scientific and technological achievements and the advantage that talent is the first resource, so as to ensure the sustainable development of the enterprise. In addition, in the entire operation and management process of the enterprise, it is also necessary to adapt to the development needs of the digital age, reform the human resource management methods, use various advanced technologies to lay a solid foundation for the human resource management of the enterprise, optimize it, and provide a reliable guarantee for the human resource management of the enterprise.

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