

Research on the Integration of System and Emotion Management in Enterprise Management in the Era of Artificial Intelligence

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Abstract: With the rapid growth of AI technology, in the field of enterprise management, especially in the era of information technology, the efficiency of human beings in information transmission and processing continues to improve. However, due to the defects of traditional thinking mode such as self-isolation to a certain extent, and the influence of emotional factors on human nature cognition, this article needs to use intelligent, automated and information means to improve the manual operation mode, and apply Artificial Intelligence(AI) technology to enterprise management, integrate system and emotion, and design management models. After that, the running effect of the model is tested. The test results show that the quality control defect rate can be controlled within 2%; satisfaction with humanistic care is up to 94%, and satisfaction with emotional value is up to 96%. This shows that the service quality combining system and emotion has been correspondingly improved.

1. Introduction

With the rapid growth of AI, enterprise management is facing many new problems, including high employee turnover rate and high staff mobility. In order to solve these problems, it is necessary to conduct in-depth research on the integration of enterprise system and emotion management, so as to improve the work efficiency and loyalty of employees, and promote them to better play their role in the organization. This not only provides a good environment and basic guarantee for China's scientific and technological innovation, but also lays a theoretical foundation for the improvement of enterprise competitiveness, and has important practical value.

With the growth of AI technology, there are many new types of problems, such as information security and data leakage, which have a serious impact on human society. In order to deal with these problems, this paper needs to establish a new organizational structure, which can deal with the complex and ever-changing business management system and emotional culture system. In this process, it is also necessary to fully understand the relationship between people and machines, and in-depth understanding of humanized design methods to better manage employees, improve

efficiency and respond to various emergencies, so as to promote the innovation of enterprise management system in the era of intelligence.

The innovation of this paper is mainly reflected in two aspects. First of all, the research object is targeted, that is, in the era of AI, the integration of enterprise management system and emotion management has been optimized and integrated, which has improved the original corporate culture and organizational structure. Through the application of scientific and technological growth achievements in the new era to practical work to solve practical problems, while providing reference significance and practical experience for other fields of relevant theories and suggestions and guidance, which has important practical value for promoting the construction of China's science and technology innovation country. Secondly, this paper integrates information technology into the organization management system. At present, many large companies in China have established information system platforms based on Internet technology to improve their system operation efficiency and optimize business processes. However, in the era of AI, the organizational structure of enterprises is also changing and improving. Therefore, from the perspectives of management system, emotional culture and incentive mechanism, this paper proposes to combine information technology with organizational management system to further improve employees' work efficiency and loyalty, and promote the innovation of enterprise management system.

2. Related Work

With the rapid growth of AI technology, its understanding and application are getting deeper and deeper. In the context of the rapid growth of information technology, intelligent tools have been produced in large numbers, and the emotional and psychological needs of business management have become crucial. However, most domestic companies have not yet established a perfect and sound human care system and employee incentive mechanism, and have not carried out relevant research work. In contrast, some developed countries pay attention to the use of data mining technology, machine learning theory and AI and other means to achieve the effective combination of customer personalized service. Vladimir Tsyganov's research explored the relationship between social and political stability, voters' emotional expectations and information management [1]. The study of Jorge Fernandez Herrero et al. introduced the steps of applying AI emotional expression recognition software to emotion management in an educational context [2]. Jose Arias-Perez et al. 's research focuses on the organizational emotional capacity and the absorptive capacity orientation of competitors to stimulate the open innovation process [3]. Zahra Sarhadi et al. assessed the impact of knowledge management and emotional intelligence on the work efficiency of Iranian librarians [4]. Satyanarayana Parayitam et al. explored the relationship between role conflict and organizational performance in India, and studied how knowledge management and emotional exhaustion play a moderating role [5]. Yong Liao and Rui Kong analyzed the complexity of iot RFID in the management of fast fashion enterprises [6]. Faizan Ahmed Khan et al. introduced the process discovery and improvement of enterprise management system [7]. Jannis Beese et al studied the impact of enterprise architecture management on the complexity of information system architecture [8]. Raphael David Schilling et al. explored the strategic alignment of enterprise architecture management and how the combination of control mechanisms tracked the ten-year corporate transformation of Deutsche Commerzbank [9]. Islam O. Sulumov et al. studied the problems of enterprise human resource management during the growth of new forms of employment [10]. To sum up, in enterprise management, emotion management mainly exerts influences in the following three aspects: First, it makes integrated analysis and prediction of information resources such as employees, customers and suppliers; the second is to establish a performance management system based on knowledge sharing platform through data mining technology; the third is to realize the

incentive and constraint through the performance feedback mechanism.

3. Method

3.1 AI Technology

AI is a new science and technology based on computer technology, which realizes the ability to recognize and judge things by processing a large number of complex and abstract information. To a certain extent, AI can simulate the way human intelligence thinks and automatically analyze data results. In addition, AI also uses machine language to express and explain the problems and reasoning logical relations involved in the cognitive process of things. The growth of AI comes from the research of human brain technology, which is a new type of science and technology. AI technology refers to the simulation and perception of the human brain through computers, information processing and related intelligent tools, and makes corresponding responses according to its own brain cognitive ability. This technology has a high degree of intelligence and versatility. In the era of AI, enterprise management needs to combine different types of emotional needs to achieve human care and guidance, and also need to pay attention to effective analysis and research on employees' emotional state and behavior, so as to help enterprises develop suitable and targeted incentive mechanisms to promote employees' work enthusiasm. Based on computer, AI technology has made certain progress in information processing, automatic control and intelligent machine learning [11-12]. In the decision-making process, a large number of complex and highly accurate data is essential. In radar signal recognition system, a large amount of data needs to be collected, and sensor technology needs to process and predict this complex, large amount, variety and unstructured information. Therefore, AI can be used to process and predict these data. In the enterprise management of AI, the integration of system and emotion management is of great significance. This fusion combines institutional norms with emotional factors to improve organizational effectiveness and employee satisfaction. The relationship between system implementation efficiency (X) and emotional factor (Y) can be expressed by the following formula:

$$X = a * Y + b * Z \quad (1)$$

In the formula, a and b are weight parameters, and Z represents other factors that may affect the efficiency of system implementation. This formula can be applied to a series of data samples to calculate the specific value of the weight parameter. By adjusting the parameters, we can find the best balance point between institution and emotion management. The following formula can be used to accurately measure the comprehensive index of the degree of institutional norms and the influence of emotion management:

$$M = c * A + d * B + e * C \quad (2)$$

In the formula, A represents institutional normality, B represents emotion management factors, and C represents other possible relevant factors. c, d, and e are the weight parameters. Through statistical analysis of the data, the best weight parameters can be determined, and the comprehensive index M can be calculated to evaluate the integration effect of institutional and emotional management. In order to assess the degree of innovation in AI applications, the following formula can be used:

$$I = f * D + g * E + h * F \quad (3)$$

In the formula, D represents the data analysis effect of AI, E represents the emotional intelligence factor, and F represents other innovation factors. f, g, and h are weight parameters. Through quantification and analysis of relevant data, innovation index I can be calculated to

measure the innovation effect of AI on institutional and emotional management in enterprise management. Artificial neurons generate a kind of "memory" by constantly learning new knowledge, so as to realize the interconnection between the human brain and the brain, and automatically regulate the information processing capacity. This kind of neural network is composed of nonlinear functions composed of a large number of repetitive data, which can maintain normal operation, control complex behaviors, realize self-cognition and other functions under uncertain environment [13-14]. In the era of AI, business management is human-centric, treating people as the core elements of machines and information processing systems. In the process of science and technology growth, humanization has become an important direction. Intelligent robot technology enables users to enter a personalized interactive environment, self-learning, self-realization, and contact, communication and interaction with the outside world. In this paper, intelligent robots can perform decision analysis and behavior control by sensing other people's instructions. Intelligent robots can also integrate personal emotions into online platforms, achieving the goal of emotional regulation and expanding interpersonal relationships and social circles.

3.2 Integration Model of Institutional and Emotional Management in Enterprise Management

In the enterprise management, the system is an important part of the organization, and the emotion management is the auxiliary service content. In order to realize the integration of the two, it is necessary to establish a perfect and effective communication mechanism and exchange platform to coordinate and link up work. In addition, it is also necessary to improve the level of professional ethics and psychological quality through employee training and other means, and use incentive policies to promote emotional expression and strengthen emotional investment to meet the spiritual needs of employees, so as to achieve the goal of corporate culture construction [15-16]. From another point of view, in order to realize the integration of system and emotion, it is necessary to establish a humanized management system. In the process of enterprise growth, the continuous training of employees, so that they can adapt to the position, and create value for the company, which is determined by the needs of humanity. In order to achieve the coordination between organizational goals and individual behaviors, it is necessary to establish a good communication channel and perfect incentive mechanism to improve the enthusiasm of organization members. Secondly, it is necessary to strengthen the implementation of team building and management system, so that managers can give full play to their own abilities and influence. In enterprise management, system and emotion refer to the behavior and attitude generated by employees in the process of work, as well as the coordination of the relationship between things and others. Figure 1 shows the integration model of institutional and emotional management.

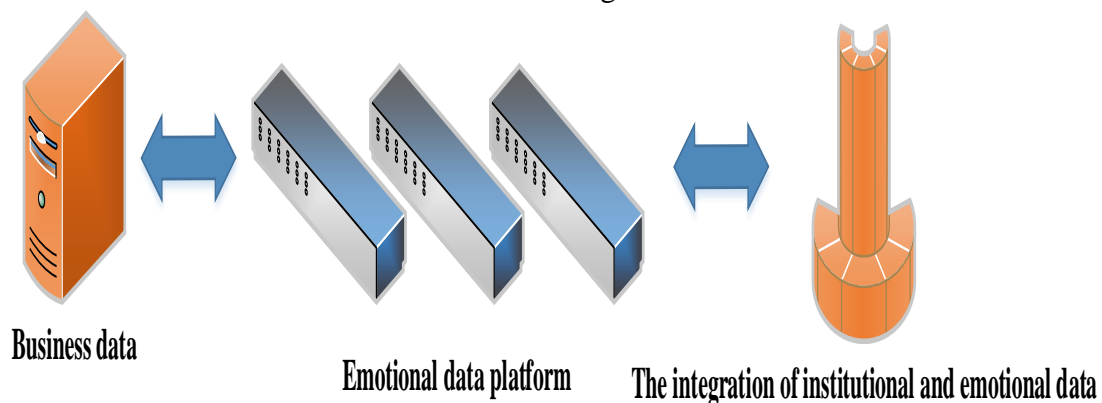


Figure 1: The fusion model of system and emotion management

For a company, it is necessary to establish a system that is people-oriented, meets the needs of humanity and has certain special characteristics. For a company, it is necessary to establish a system that is people-oriented, meets the needs of humanity and has certain special characteristics. In addition, starting from the mutual growth of emotions and employees, a complete institutional system can be built to ensure that emotions can play an effective role and effect [17-18]. In business management, the concept of emotion management refers to the two-way interaction between employees and organizations. When the two sides communicate, it can produce a good interaction effect. In this case, it can increase the trust of both managers and the managed, improve work efficiency, achieve common growth goals, improve the overall performance of the company, and promote social harmony and stability. In enterprise management, because different employees have different emotional needs, it is necessary to build an effective incentive model based on the combination of AI technology and management concepts to meet the needs of employees. In the work of system construction and emotion management, taking people as the core is the key. Humanization, scientificity and innovation are the basic conditions for system construction and emotion management. Therefore, this paper can incorporate corporate culture as a humanistic care approach to meet the inner needs of employees and stimulate their enthusiasm for work, so as to create maximum benefits and value for enterprises.

4. Results and Discussion

4.1 Testing the Application Effect of AI in Enterprise Management

The testing process of the application effect of AI technology in enterprise management includes the following main steps. First, the data needs to be preprocessed, through the analysis of the data, to determine the need for classified statistics, and convert the information into a format suitable for decision makers. Secondly, the model, parameter base and database are established, and the sample features collected by the massive complex system are extracted by the computer, and the relevant rule base is generated to realize the modeling and predictive analysis process. The application of intelligent technology in enterprise management activities can help managers quickly understand the working status and needs of employees, and find problems and deal with them in time by collecting, sorting and analyzing data [19-20]. Among them, artificial neural network technology is an intelligent information model developed based on the cognitive system of human brain. It can automatically obtain various complex behavior patterns and related knowledge system structure images generated in the thinking process of human brain, and use the model to conduct the correlation between decision assistance function and emotion management, so as to provide help or solutions to the emotional and mental state problems that may occur in the work of enterprise employees. The original database is processed and screened effectively by means of intelligent technology and network communication. This paper will conduct 5 rounds of tests on this model. Table 1 shows the test hardware environment.

By sorting and extracting a large amount of information, useful data can be obtained for decision-makers' reference, and some non-quantitative or semi-qualitative attribute information can be converted into quantitative or digital forms to assist decision-making and help enterprise managers choose corresponding management strategies to cope with risk problems brought by emergencies of different degrees.

Table 1: Test specification

Testing equipment	Equipment specifications
Server	CPU: Intel Xeon Gold 6248R 2.9GHz, RAM: 128GB, Storage: SSD 1TB
Customer service terminal equipment	CPU: Intel Core i7-10700K 3.8GHz, RAM: 16GB, Storage: SSD 512GB
Industrial control console	CPU: Intel Core i5-9600K 3.7GHz, RAM: 8GB, Storage: HDD 1TB
Testing instruments	Resolution: 1920 * 1080, supports AI algorithm processing/analysis
Recruitment platform	CPU: Intel Pentium G5400 3.7GHz, RAM: 4GB, storage: HDD 500GB
Monitoring system	Camera: 1080p Full HD, storage: NAS 4TB
Data server	CPU: Intel Xeon E5-2690 v4 2.6GHz, RAM: 256GB, Storage: SSD 4TB
Logistics management terminal equipment	CPU: Intel Celeron J4105 1.5GHz, RAM: 8GB, Storage: SSD 256GB

4.2 Analysis of Test Data

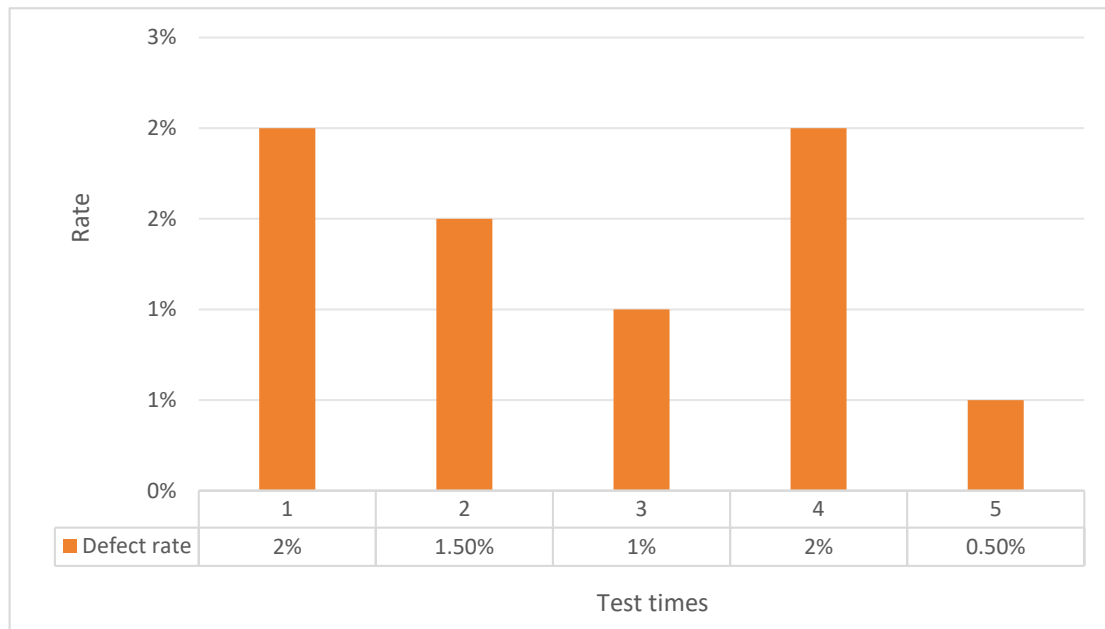


Figure 2: Defect rate of quality control

The defect rate test of quality control aims to find the root cause by analyzing the error in the production process of the product, and put forward the corresponding solution to improve the management level and service efficiency of the enterprise. In quality control technology, process

capability index is very important. In the traditional cost management mode, enterprises mainly rely on post-inspection and regular sampling inspection to carry out product inspection and production management activities. However, the application of intelligent technology can realize the functions of pre-control and in-process supervision. After the intelligent optimization of the management model test, from the data in Figure 2, the quality control defect rate of this paper can be controlled within 2%.

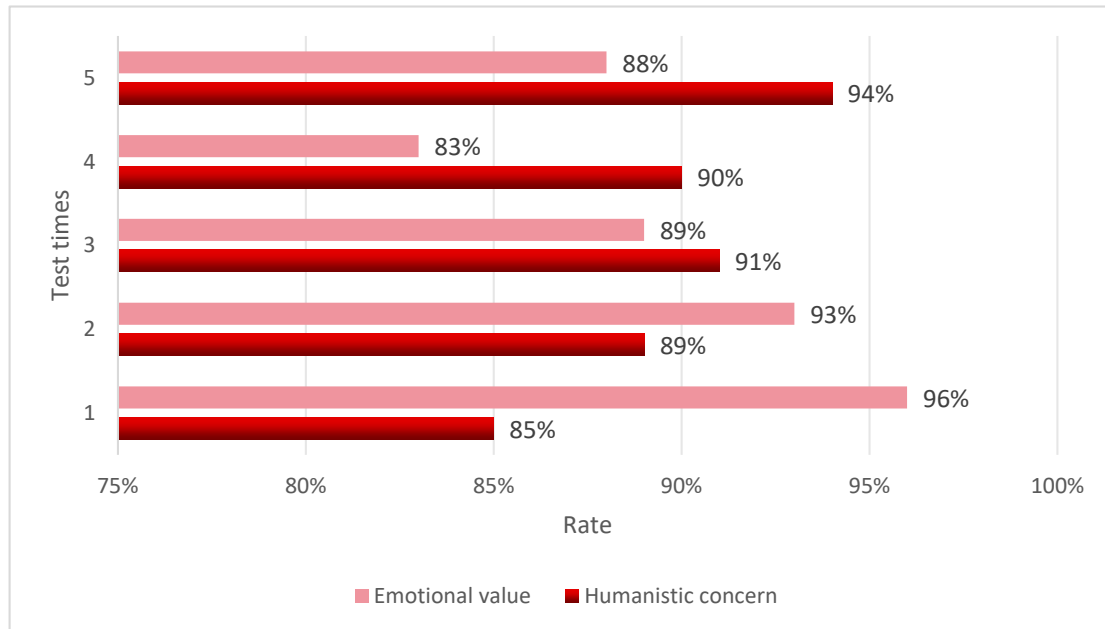


Figure 3: Satisfaction with customer service

Customer service satisfaction is the result of providing psychological, material and emotional needs to consumers after evaluating product quality and performance. It is designed to meet the needs of consumers and ultimately form a comprehensive evaluation and recognition. In the era of AI, the requirements for employee service level are higher. Employees not only need to have rich work experience, but also need to have certain communication skills. Therefore, enterprises should establish a sound, reasonable and effective customer service system and management system to enhance customer satisfaction. According to the results of the customer service satisfaction survey in Figure 3, the highest degree of satisfaction of humanistic care is 94%, and the highest degree of satisfaction of emotional value is 96%. This shows that the service quality combining system and emotion has been correspondingly improved.

5. Conclusion

With the progress of AI, emotion management is constantly introduced into the field of business management. Therefore, how to establish a sound emotion management system has become one of the focuses of current research. This paper aims to analyze the problems and causes of employee emotion management in the current growth stage of Chinese enterprises, and put forward targeted suggestions and countermeasures, so as to provide reference and reference value for improving employee work efficiency, promoting the realization of the company's strategic goals and improving customer satisfaction. This study also provides theoretical support for relevant scholars to promote the improvement of enterprise management system in the era of AI. However, this study has the following shortcomings: when analyzing the fusion relationship between enterprise management system and emotion management in the era of AI, it only considers the influence of AI technology

on the organizational structure and function of traditional companies, but ignores the analysis of its internal mechanism. This paper does not study the different needs, motivation characteristics and individual characteristics of employees in this stage from the perspective of employees, and takes corresponding measures according to specific situations. Therefore, there may be certain limitations in practice. In view of the above shortcomings, future research can further strengthen the methods and techniques of data acquisition to improve the credibility of empirical analysis. In addition, it should deeply study the integration mechanism of enterprise management system and emotion management in the era of AI, so as to better transform theory into practice. It can also pay attention to the needs and personalized characteristics of employees, and strengthen communication and interaction with employees to achieve more effective emotional management.

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