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Construction of Enterprise Human Resource Information Security Management Platform Based on Data Mining Algorithms

JinZhao Song

Faculty of Automotive Applications, Changchun Automobile Industry university, Changchun, jinlin, China

Abstract:

The theoretical basis of the concept of organizational support is social exchange theory, and organizational support is actually the social exchange relationship between employees and the organization. This paper combines the data mining technology to analyze the impact of organizational support on employee creativity. Moreover, according to the characteristics of enterprise management data, this paper proposes an immune algorithm-based enterprise management data mining algorithm, and constructs an intelligent analysis model based on data mining. Through data mining, it can be found that the sense of organizational support has a certain impact on the creativity of employees, and the sense of organizational support can effectively improve employees' work communication and work efficiency, and enhance their creativity. Moreover, it plays an important role in supporting the development of the enterprise and the personal development of employees.

Keywords: data mining; organizational support; employee creativity; influence mechanism; Information Security

1 INTRODUCTION

Work design is the focus of organizational management practice. It describes how to construct, formulate and revise the process of work, tasks and roles, and emphasizes the simplification, standardization and specialization of work tasks. Moreover, a good job design is an important foundation and guarantee for the effective operation of an organization, and it may have a profound impact on individuals, teams and organizations [1]. The designed work is not static. According to the needs of organization and personnel development, managers or organizational human resources experts will also adjust and optimize existing work, which is the so-called work redesign [2]. The traditional work design concept is mainly organization-oriented and serves the organization's goals. Therefore, we usually call traditional work design and work redesign a top-down process. That is, the management and human resource consultants are mainly responsible for the content of the evaluation work, and they develop standardized work instructions based on these evaluations to conduct targeted recruitment plans and employee training, and employees can only carry out their own work in accordance with the work instructions. In this process, employees at best only provide managers and human resources departments with opportunities about current job characteristics to assist managers in job design and redesign, and they rarely have the opportunity to really participate in [3].

Because of its efficiency-oriented characteristics, the traditional top-down work design has promoted the efficient operation of the enterprise for a long time since it was proposed, and has played a huge role in the operation of the enterprise: on the one hand, standardized Work design and rigorous process management have greatly improved the work efficiency of employees, reduced the operating costs of the company, and brought a higher level of performance to the company. On the other hand, standardized work instructions also help the human resource management department to standardize the management and performance evaluation of employees' work content. However, with the development of economic globalization and knowledge economy, the external and internal environments faced by enterprises have undergone earth-shaking changes, which makes it more and more difficult for organizations to design normative job descriptions that are applicable to multiple parties. On the one hand, the external economic environment has gradually changed from the original manufacturing industry to the service industry. With the development of globalization and multinational companies, business competition among enterprises has intensified, and innovative technologies and flexible working methods that serve virtual office and teamwork have continued to increase. Derived and updated, customers have more demands for flexible and efficient services, and employees also hope to have more subjective initiative and autonomy in the execution of specific tasks. On the other hand, the workplace itself has also undergone corresponding changes. For example, the increase in female workers and temporary labor, the continuous improvement of employees' education, and the changes in the psychological contract between employers and employees.

This article combines data mining technology to analyze the impact of organizational support on employee creativity and build an intelligent model. Moreover, this article uses intelligent models to discover problems in real time during the operation of the enterprise, so as to further enhance the role of employees in the enterprise and further improve the efficiency of enterprise operation.

2 RELATED WORK

The influence of personality characteristics on creativity has received the main attention of scholars in the early creativity research. In this type of research, the results of the literature [4] show that there is a significant positive correlation between creativity personality score and creativity. The literature [5] showed that all the dimensions of the "Big Five" model are related to creativity, among which conscientiousness and openness have the most consistent connection with creativity. In the field of creativity research, the creativity component model proposed in the literature [6] pointed out that knowledge, skills and motivation have an important influence on creativity. The creativity interaction model in the literature [7] also emphasized the important influence of knowledge skills and motivation on creativity. The influence of cognitive style on creativity has also attracted many scholars' attention. The literature [8] believed that individuals have an innate orientation or preference for solving creative problems, and this orientation or preference will have an impact on individual creativity. "Adaptation-Innovation Theory" points out that cognitive style is a continuum. At one extreme of this continuum is the adaptor, the adaptive cognitive style. Adaptors are relatively conservative and like to use a given model and program to operate, regardless of its effectiveness. Corresponding to the other extreme of the continuum of cognitive styles is innovators, that is, innovative cognitive styles. Innovators are relatively adventurous, and are more willing to take the risk of violating established methods to find new solutions that are fundamentally different from the past. The results of the literature [9] show that individuals with innovative cognitive styles tend to be more creative than those with adaptive cognitive styles.

In the research on the impact of task characteristics on creativity, many scholars believe that the way of task design will have an important impact on creative output. For example, the set creativity goal can play an effective role in improving the creativity performance of employees [10]. In addition, studies have found that task complexity can also effectively improve employee creativity [11]. Leadership style is one of the most important factors affecting employee creativity. Empirical research results show that supportive and non-controlling leadership styles, transformational leadership styles, and the quality of the relationship between employees and supervisors affect employee creativity [12]. The support of colleagues can also enhance the creativity of employees. The higher the degree of support from colleagues, the higher the creativity of employees [13]. Literature [14] focuses on the impact of employee interaction on employee creativity. The results of the study show that employee interaction will stimulate employee creativity, and the healthy competition between colleagues can enhance employee creativity. Organizational atmosphere also has an important influence on employees' creativity, and a suitable organizational atmosphere will promote employees' creativity. The creative work environment is usually referred to as the organizational innovation atmosphere. The organizational innovation atmosphere is divided into two factors: "innovation support" and "resource support". Literature [15] conducted an empirical study. The results of the study found that members' awareness of "innovation support" in the organizational atmosphere significantly positively affects individual innovation behavior.

Literature [16] defines organizational support as employees' overall view of whether the organization values its contribution and whether it pays attention to its happiness. Wen [17] developed a 36-item scale to evaluate employees' sense of organizational support. Factor analysis shows that the load of these 36 items is very high and can be classified as one factor. Literature [18] defines organizational support as employees' perceived organizational support for their work, recognition of their value, and concern for their interests. Literature [19] believes that the sense of organizational support of enterprise employees is a multi-dimensional structure that includes three factors: caring for benefits, employee value recognition, and work support. These three factors are the reflection of employees' work motivation, namely, the guarantee of survival, social interaction and others. Respect, growth and self-realization, so the organization's support for employees in these three aspects will produce effective incentives for employees. I believe that this three-dimensional model is more reflective of the motivation of the organization's support for employees than the Western single-dimensional model. Important role.

3 IMPROVEMENT OF DATA MINING ALGORITHM FOR ENTERPRISE MANAGEMENT BASED ON IMMUNE ALGORITHM

Constructing actual Bayesian network structure from data has proved to be an NP-hard problem of complex networks. Experts and scholars mainly proposed two methods of Bayesian network structure learning: search scoring method and correlation analysis method. The learning method includes two parts: scoring function and search strategy[20].

1) Scoring function

The scoring function is the criterion for selecting the network structure. And it is used to judge whether the structure is optimal, and the selection of the scoring function is the key link of the method.

(1) Scoring function based on information theory

The MDL scoring function is proposed by Rissanenl based on the principle of minimum code length, and its formula is as follows:

$$V(S,D)=\frac{\log m}{2}l-\ln P\left(D\mid S,\hat{\theta}\right) \quad (1)$$

In the formula, S is the network model to be scored, D is the data set, m is the amount of sample data, 1 is the code length, and θ is the parameter vector.

The DML score describes the joint probability distribution reflected by the sample. The MDL contains the description length of the network and the code length of the sample. The network structure should be selected to minimize the sum of the two lengths.

The BIC scoring function and the AIC scoring function are based on the maximum likelihood function. The likelihood function can detect the degree of matching between the candidate network and the empirical distribution of the data, and its calculation formula is:

$$\begin{aligned} V(S,D)&=\ln P\left(D\mid S,\hat{\theta}\right)\\ &=\ln\prod_{t=1}^{m}P\left(D\mid S,\hat{\theta}\right)=\ln\prod_{i=1}^{n}\prod_{j=1}^{p_o}\prod_{k=1}^{q_i}\left(\hat{\theta}_{ijk}\right)^{N_{ijk}} \end{aligned} \quad (2)$$

In order to prevent the model from overfitting to the data, a penalty item is added to the scoring function. It can bias the scoring criteria to a network with a simpler structure. The formula is as follows:

$$V(S,D)=\ln\prod_{i=1}^{n}\prod_{j=1}^{p_o}\prod_{k=1}^{q_i}\left(\hat{\theta}_{ijk}\right)^{N_{ijk}}-f(m)\times\dim(S) \quad (3)$$

In the formula, m represents the number of samples, dim(S) is generally set as the number of parameters in the structure to represent the complexity of S, and f(m) is a non-negative function. The penalty of the AIC scoring function has nothing to do with the size of the sample, we set f(m)=1. In the BIC criterion, we set f(m)='lnm.

(2) Bayesian scoring function

The scoring idea of Bayesian scoring function is to find the network structure with the largest posterior probability based on the prior probability knowledge of the network structure. The Bayesian scoring metric is described as:

$$\begin{aligned} V(G:S)&=\log P(S\mid D)\\ &=\log\mathrm{P}(D\mid S)+\log P(S)-\log P(D) \end{aligned} \quad (4)$$

In the formula, D is the data set, S is the network structure being scored, and P(S) is the prior distribution probability of the network structure S, which is generally assumed to be a uniform distribution.

It can be seen from the above formula that the posterior probability P(S|D) can be calculated from P(D|S). And

the calculation formula of P(D|S) is as follows:

$$P(D|S)=\int P(D|S,Q)P(Q|S)dQ \quad (5)$$

Its value represents the conditional probability value related to S, and P(Q|S) is a conditional probability density function.

For the choice of prior values P(S) and P(Q|S), the difference of Bayesian Dirichlet (BD) metric is that it assumes that the prior of each network S obeys the Dirichlet distribution. The formula is as follows:

$$P(S|D)=P(S)\prod_{i=1}^{n}\prod_{j=1}^{q_i}\frac{\Gamma(N_{ij}^{'})}{\Gamma(N_{ij}^{'}+N_{ij})}\prod_{j=1}^{q_i}\frac{\Gamma(N_{ijk}^{'}+N_{ijk})}{\Gamma(N_{ijk}^{'})} \quad (6)$$

In the formula, $N_{ij}^{'}=\sum_{k=1}^{r_i}N_{ijk}^{'}$, $N_{ij}=\sum_{k=1}^{r_i}N_{ijk}$, $N_{ijk}^{'}$ are the exponential parameters of the Dirichlet distribution, S is the BN structure, D is the data set, r_i is the number of states of variable x_i equal to k, q_i is the number of states of $\prod_i$, n is the number of variables, N_{ijk} is the number of cases where $x_i=k$ and $\prod_i=j$ in the data set D, and $N^{'}$ is the equivalent sample size.

Both types of scoring methods have their own advantages and disadvantages.

2) Search strategy

It proposes a classic three-stage dependency analysis algorithm. The three-stage learning method mainly includes the following three stages:

(1) The algorithm constructs the initial network by calculating the mutual information between the two nodes.

(2) The algorithm calculates the conditional mutual information of the two nodes sharing the edge in the initial network. If the condition is related when it is not d-separation, the edge is retained, otherwise it is deleted.

(3) The algorithm performs conditional mutual information judgment on the node pairs that are d-separated in (2). If it is still greater than the given threshold, the edge is retained, otherwise the edge is deleted.

The definition formula of mutual information and conditional mutual information of two variables in the network is as follows:

$$I(X,Y)=\sum_{x,y}P(x,y)\log\frac{P(x,y)}{P(x)P(y)} \quad (7)$$

$$I(X,Y|C)=\sum_{x,y,c}P(x,y,c)\log\frac{P(x,y|c)}{P(x|c)P(y|c)} \quad (8)$$

By comparing the values of I(X,Y) and I(X,Y|C) with a given threshold, we judge whether the variables are correlated.

According to the process steps of the improved immune algorithm, the process steps of the proposed improved immune algorithm learning BN structure algorithm (BN_IIA) are shown in Figure 1.

Step 1: the algorithm generates some network structures to form the initial population;

Step 2: the algorithm calculates the fitness value of the initial population, that is, scores the Bayesian network;

Step 3: the algorithm selects memory cells and extracts the vaccine;

Step 4: the algorithm judges the termination condition. If the termination conditions are met, the algorithm ends and the optimal network is output, otherwise the following steps are performed.

Step 5: the algorithm performs immune gene operations, crossover, mutation, and vaccine injection operations.

Step 6: the algorithm performs an immune selection operation on the population after the immune operation, and retains the network structure with a high score.

The seventh step: the algorithm performs a population update, that is, the new antibodies that are added and the remaining antibodies are merged into a new population. The algorithm returns to the second step for the next iteration.

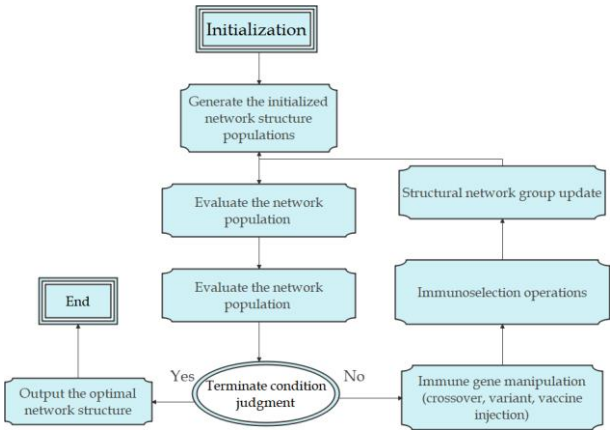

Figure 1 Flow chart of network structure learning algorithm based on improved immune algorithm

This paper adopts matrix coding method, and the value of each node is {1,0}. In this paper, a $n \times n$-order matrix is used to represent a Bayesian network with n nodes:

$$A = \left(a_{ij} \right)_n \quad (9)$$

For each column in the matrix, it represents the set of parent nodes of a certain node, and for each row in the matrix, it represents the set of child nodes of a certain node.

$$A = \begin{bmatrix} 0 & 0 & 0 & 0 & 1 \\ 0 & 0 & 0 & 1 & 1 \\ 0 & 1 & 0 & 1 & 0 \\ 0 & 0 & 0 & 0 & 0 \\ 0 & 0 & 0 & 0 & 0 \end{bmatrix}$$

For example, the matrix means that the child nodes of node X_1 have only X_5, the child nodes of X_2 have X_4 and X_5, the child nodes of X_3 have X_2 and X_3, and X_4 and X_5 have no child nodes. Therefore, the directed graph 2 can be represented.

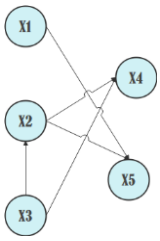

Figure 2 Example of a directed graph

The fitness function is used to reflect the degree of matching between the network and the data, and has the same effect as the scoring function. The BIC scoring function includes a penalty part to suppress the complexity of the optimal structure. Therefore, it is selected as the scoring function. It is used to evaluate the possible BN structure, and the formula is as follows:

$$V_X^{BIC} = \sum_{i=1}^{n}\sum_{j=1}^{q_i}\sum_{k=1}^{r_i} m_{ijk} \ln \frac{m_{ijk}}{m_{ij}} - \sum_{i=1}^{a} \frac{q_i (r_i - 1)}{2} \ln m \quad (10)$$

The BIC function of the entire network can be decomposed into the sum of the individual functions of each node. Therefore, the formula (10) can be expressed as:

$$V_X^{BIC} = \sum_{i=1}^{n}\left(\sum_{j=1}^{q_i}\sum_{k=1}^{r_i} m_{ijk} \ln \frac{m_{ijk}}{m_{ij}} - \sum_{i=1}^{a} \frac{q_i (r_i - 1)}{2} \ln m \right) = \sum_{i=1}^{n} V_{X_i}^{BIC} \quad (11)$$

In the formula, q_i represents the number of parent nodes of the i-th node, r_i describes the number of possible states of the i-th node, m_{ijk} represents the number of samples satisfying that the i-th node is in the k-th state and its parent node set is in the j-th state, m_{ij} Represents the number of samples whose parent node set of the i-th node is in the j-th state, and m represents the number of samples in the data set.

BN-IA fitness plays an important role in individual selection. Based on the calculation of (11), we can get:

$$V_X^{IA} = -\frac{K}{V_X^{BIC}} = -\frac{K}{\sum_{i=1}^{n} V_{X_i}^{BIC}} \quad (12)$$

In the formula, K is a set variable. It is used to maintain the final fitness of a reasonable scale.

High-affinity antibodies often contain excellent gene fragments. Vaccination process will destroy the excellent gene fragments to a large extent. This is not conducive to antibody optimization. Therefore, only mutation operations are performed to expand the search space and ensure population diversity. Vaccine injection and mutation operations are performed on the remaining antibodies with poor affinity. Through the injection of the vaccine, the algorithm is accelerated to the optimal solution. Combining mutation operation can ensure the diversity of the algorithm, prevent the algorithm from premature and fall into the local optimum, and expand the search space. According to the particularity of the network structure, the mutation operator only uses the following three types:

①Add edge: it randomly changes a bit with a value of 0 in the network matrix. This means adding a directed edge to the network. That is, $a_{ij} = 0$ .Specifically, the network matrix value is changed from 0 to 1. This means adding a directed edge from node x_i to node x_j in the network, that is, $x_i \rightarrow x_j$. Node x_i is the parent node of node x_j;

②Delete edge: it randomly changes a bit with a value of 1 in the network matrix. This means deleting a directed edge in the network. That is, $a_{ij} = 1$. Specifically, the network matrix value is changed from 1 to 0. This means deleting the directed edge from node x_i to node x_j in the network, Node x_i is the parent node of node x_j;

③ Change the direction of the edge: the directed edge from node x_i to node x_j is changed to the directed edge from node x_j to node x_i . that is, change $a_{ij} = 1$, $a_{ij} = 0$ to $a_{ij} = 0$, $a_{ij} = 1$. That is, exchange parent and child nodes.

It should be noted that after the immune gene operation, you need to check the maximum number of elements in the parent node set of each node to prevent it from exceeding the preset maximum number of parent nodes. When it exceeds the maximum number of parent nodes, delete redundant parent nodes. .

Since the research of gene regulatory network is still in the initial stage and its structure is not fully understood, this paper uses simulation data of a network with a completely known structure to verify the effectiveness and accuracy of the algorithm. This paper verifies the algorithm on the Bayesian benchmark network, Asia network

and Alarm network, and compares it with the classic Bayesian algorithms: K2 algorithm, hill-climbing search algorithm (HC) and algorithm based on general immune algorithm to learn Bayesian network structure (BN_GIA) for comparison. Since the order of the nodes cannot be known in advance when constructing the gene regulation network, the order of the nodes of the K2 algorithm compared in this paper is set randomly.

The Asia network is a small network of the diagnostic system, which contains 8 nodes and 8 edges, and each node has only 2 possible values.

The Alarm network is a total of 37 discrete variables and 46 directed edges. Moreover, the value of each node is between 2-4 from the network model of the medical diagnosis and early warning system. Figure 3 shows the structure of the Alarm network.

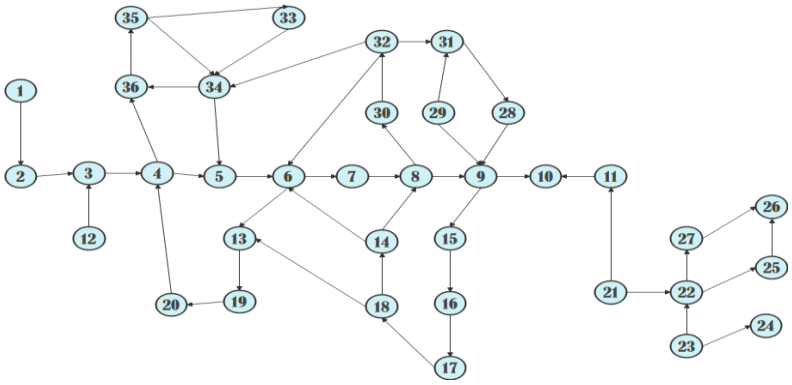

Figure 3 Alarm network structure diagram

When using simulated data to build a network with a known structure (target structure), the accuracy, specificity, and F_factor of the algorithm's evaluation indicators are used.

$$accuracy = \frac{TE}{SE} \quad (13)$$

$$specificity = \frac{TE}{CSE} \quad (14)$$

$$F\_factor = \frac{2 * accuracy * specificity}{accuracy + specificity} \quad (15)$$

The larger the value of the comprehensive index F_factor, the higher the accuracy of the algorithm and the better the effect.

4 RESEARCH ON THE INFLUENCE MECHANISM OF ORGANIZATIONAL SUPPORT ON EMPLOYEES' CREATIVITY BASED ON DATA MINING

The goal of leadership is to make change. As a typical leadership style, innovative leadership also has the characteristics of making change. The existence of innovative leadership is to motivate the led employees to have higher enthusiasm and devote themselves to individual innovation activities. The multi-context framework theory of innovative leadership is shown in Figure 4.

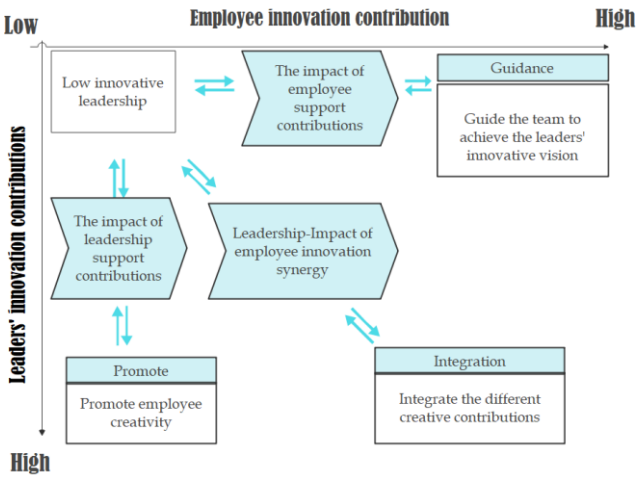

Figure 4 The multi-context framework theory of innovative leadership

The theoretical model shown in Figure 5 is a simple summary of the content of this research. This model reflects the main content of the three aspects of this research: (1) This article expands the connotation structure and dimensions of creativity-oriented human resource management practices, and develops corresponding measurement tools; (2) This article examines the linear relationship between creativity-oriented human resource management practices and organizational creativity, and explores the mediating role of innovation culture on the relationship between the two, and the mediating role of organizational structure on the relationship between innovation culture and organizational creativity;. (3) This article studies the linear relationship between creativity-oriented human resource management practices and employee creativity. Moreover, this article explores the mediating role of employees' creative self-efficacy on the relationship between the two, and the moderating role of supervisory innovative leadership on the relationship between creativity-oriented human resource management practices and employees' creative self-efficacy. In specific research, the structure of the theoretical model will be gradually verified and revised based on the research results.

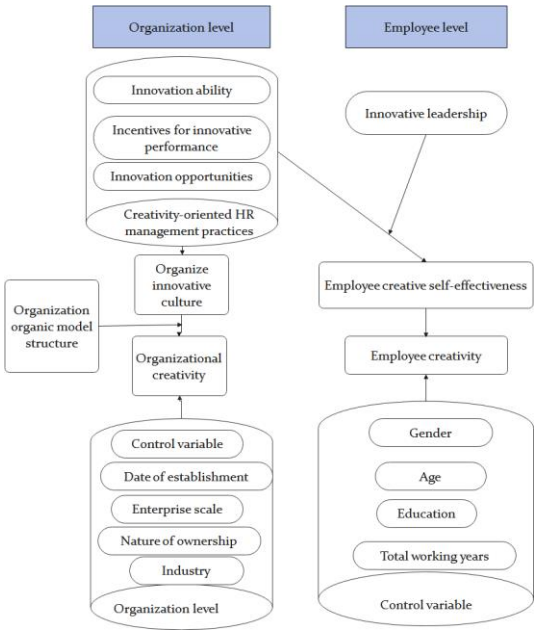

Figure 5 Theoretical research model

Human resource management is composed of various types of management activities, which influence the performance of individuals or organizations based on the best practices of human management. Human resource management practices are divided into three dimensions: Ability, Motivation and Opportunity, as shown in Figure 6.

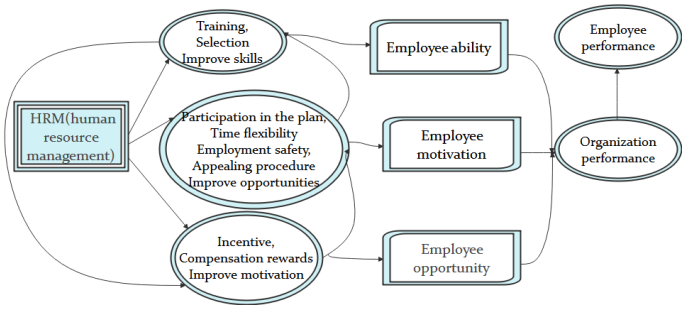

Figure 6 Human resource management paradigm of ability-motivation-opportunity

The organizational context scale developed based on this theory advocates the perception of implicit work characteristics and explicit organizational creation support, and reflects the level of creativity of the organization through the creative motivation of the organization. Figure 7 shows the theoretical model of creativity components.

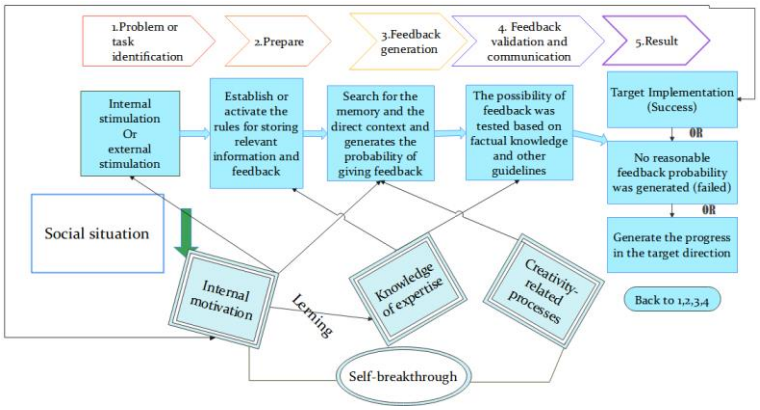

Figure 7 Theoretical model of creativity components

Based on the above model, this article combines the data mining algorithm of this article to study work communication, work efficiency, work input, creativity, and the influence mechanism of organizational support on employee creativity. The results obtained are shown in Table 1 to Table 4.

Table 1 Correlation between organizational support and employee work communication

Number	Relevance	Number	Relevance	Number	Relevance	Number	Relevance
1	66.7	13	79.1	25	73.0	37	82.0
2	65.3	14	66.8	26	77.2	38	68.2
3	85.6	15	72.2	27	76.6	39	82.5
4	82.6	16	65.8	28	83.5	40	69.5
5	70.6	17	69.3	29	70.5	41	77.4
6	68.1	18	79.7	30	70.9	42	75.5
7	68.5	19	72.1	31	70.9	43	70.0
8	72.6	20	76.8	32	83.1	44	77.9
9	84.5	21	79.8	33	73.8	45	64.4
10	64.7	22	85.3	34	85.1	46	74.2
11	70.6	23	83.2	35	69.5	47	84.8
12	85.7	24	75.8	36	84.8	48	65.0

Table 2 Correlation between organizational support and employee work efficiency

Number	Relevance	Number	Relevance	Number	Relevance	Number	Relevance
1	81.3	13	75.3	25	75.6	37	76.7
2	70.8	14	74.8	26	79.0	38	69.3
3	81.6	15	73.8	27	70.3	39	71.9
4	83.6	16	74.8	28	71.4	40	71.3
5	76.0	17	72.0	29	78.9	41	72.0
6	79.0	18	78.2	30	75.5	42	68.7
7	72.1	19	69.9	31	71.3	43	80.9
8	76.8	20	81.9	32	81.0	44	72.8
9	73.5	21	78.0	33	69.4	45	72.2
10	70.1	22	72.3	34	76.8	46	76.7
11	82.9	23	70.2	35	72.0	47	74.8
12	69.6	24	76.9	36	80.1	48	76.3

Table 3 Correlation between organizational support and employee work engagement

Number	Relevance	Number	Relevance	Number	Relevance	Number	Relevance
1	77.4	13	75.2	25	64.1	37	62.6
2	76.9	14	74.4	26	60.6	38	78.4
3	76.9	15	73.2	27	77.2	39	66.6
4	80.8	16	74.8	28	64.0	40	76.6
5	61.9	17	70.2	29	71.9	41	62.5
6	67.3	18	72.8	30	63.7	42	70.0
7	60.8	19	61.0	31	69.1	43	59.7
8	80.8	20	66.8	32	69.5	44	68.9
9	63.9	21	63.3	33	71.6	45	78.7
10	62.5	22	66.6	34	78.8	46	66.7
11	76.4	23	68.3	35	79.1	47	64.7
12	76.3	24	73.7	36	76.0	48	79.9

Table 4 Correlation between organizational support and employee creativity

Number	Relevance	Number	Relevance	Number	Relevance	Number	Relevance
1	61.8	13	80.3	25	78.9	37	67.6
2	56.6	14	80.5	26	78.3	38	57.6
3	63.6	15	59.3	27	61.1	39	67.0
4	62.6	16	65.2	28	53.5	40	59.1
5	63.4	17	71.0	29	58.3	41	59.1
6	63.5	18	62.2	30	79.5	42	53.5
7	73.3	19	77.3	31	65.7	43	69.5
8	79.0	20	74.3	32	70.6	44	73.4
9	79.5	21	72.5	33	81.5	45	56.2
10	53.0	22	77.0	34	62.3	46	75.3
11	63.8	23	66.2	35	74.2	47	73.3
12	72.4	24	59.7	36	75.0	48	76.8

It can be seen from the above analysis that through data mining, it can be found that organizational support has a certain impact on employee creativity. Moreover, the sense of organizational support can effectively improve employees' work communication, work efficiency, and enhance employees' creativity, which has an important supporting role for enterprise development and employees' personal development.

5 CONCLUSION

The traditional top-down work design process is difficult to adapt to the current flexible and changeable corporate environment. At the same time, more and more people are beginning to realize that employees can also play their own initiative in work design, and make changes in work tasks, work relationships, and work cognition to promote work to better match their own abilities and needs. Because the traditional work design process has been challenged, some people began to reflect on the current work design and work redesign process of the enterprise and propose improvement measures. This bottom-up (bottom-up) work design method carried out independently by employees also helps to promote employees' work identity and meaning. Moreover, many studies have confirmed that it has a positive effect on employees' job satisfaction, work input and work performance, and thereby enhances the efficiency of business operations, but the research on its predictive mechanism is relatively lacking. This article combines data mining technology to analyze the impact of organizational support on employee creativity and build an intelligent model. Moreover, this article uses intelligent models to discover problems in real-time during the operation of the enterprise, and further enhance the role of employees in the enterprise, and further enhance the efficiency of enterprise operation.

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