Effect analysis of human resource management closed-loop model based on information technology

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Abstract: With the continuous maturity of information technology, it has been vigorously promoted in various fields, such as the field of economic management, human resources, etc. Starting from the essence of information technology, this paper discusses the influence of human resource management mode, constructs the human resource management closed-loop mode based on information technology, and carries on the effect analysis, and gives the effect diagram of human resource closed-loop mode. At the same time, in order to further clarify the timeliness of this model, a practical study was carried out, and the practical results showed the advantages of this model. The purpose of this study is to deepen the understanding of the application of information technology in human resource management and to objectively understand the convenience brought by information technology to enterprises.

1. Introduction

In enterprise management, the importance of human resource management is self-evident [1-2]. As a product of the development of science and technology, information technology can be applied to human resource management, so that the enterprise's human resource management mode can not only be optimized and improved, but also the modern management level of the enterprise can be improved [3-5]. It can be seen that the application of information technology in enterprise human resource management is necessary for development, which can improve the competitiveness of enterprises in the domestic and foreign markets and promote the rapid development of enterprises.

2. Basic overview of human resource management and information technology

2.1 Basic overview of human resource management

In order to ensure the maximization of enterprise management efficiency, various departments and links of enterprises and organizations should be fully connected to ensure the unobstructedness of information flow, capital flow and logistics, so as to provide guarantee for the formulation and adjustment of overall strategic decisions. After these strategic deployments are rationalized, it can be found that human resource management is both a guarantee factor and an unstable factor [6]. Because each link cannot be separated from the participation of human resources, so, in a unit, the overall operation of the enterprise is closely related to personnel training, appointment and removal,

incentive, monitoring, etc. It can be said that human resource management runs through the management of the whole enterprise. If it is not reasonably optimized, it will be more difficult to achieve optimization at other levels.

2.2 Basic information technology overview

Information technology mainly realizes the design, development, installation and other operations of software or system by means of communication technology and computer science technology [7-8]. This technology belongs to the modern technology, and has the essential difference with the industrial technology, the agricultural technology, the commercial technology and the energy technology. With the rapid development of information technology, its influence in social and economic activities is gradually rising, but also has an obvious impact on the field of management. There are many technologies involved, including microelectronics technology, computer technology, integrated circuit technology, communication technology and control technology. Among them, the functions involved in computer technology have the characteristics of diversity, each function corresponds to a different grammar and calculation formula, through the input formula can get the corresponding parameter value. Take the AVERAGE function as an example, whose syntax is expressed by Equation 1. If the region $A1:A20$ contains numbers, then its function expression is expressed by Equation 2, which can be used to calculate the corresponding arithmetic mean $\bar{x}$.

$$AVERAGE(number1, [number2], \dots) \tag{1}$$

$$\bar{x} = AVERAGE(A1:A20) \tag{2}$$

3. Information technology promotes the change of human resource management mode

Since the 1990s, the rapid development of information technology and Internet, coupled with the continuous reduction of broadband costs, has boosted the integration of information technology in the field of enterprise management, especially the qualitative change of human resource management model [9-10]. In fact, the role of information technology is to realize information collection, processing, storage, transmission, use, etc. Therefore, in order to ensure the scientific nature of human resource management, it is necessary to continuously improve the two modules of human resource information management and information processing, so that the key data and information of human resource management can be summarized. Among them, the key data of human resource management include human resource analysis data, update data, development data and incentive data; Key information includes a general guide to update mechanism of human resource management information guidance, development mechanism, incentive mechanism to guide guidance information, checks and balances mechanism, the key information and key data supplement each other, one to one correspondence, namely human resource guide information corresponding to the analysis data and update mechanism, and so on a total of four groups. Each group of key data and information has a different role and purpose. For the first group of key data and information combination, it aims to realize the supplement, reorganization, optimization, elimination and flow of resources. For the second group of key data and information combination, it aims to achieve manpower promotion, tool provision, guidance communication, role transformation, process restructuring, etc. For the third group of key data and information, it aims to realize value promotion, achievement distribution, responsibility arrangement, long-term incentive, and post-evaluation, etc. For the fourth group of key data and information combination, it aims to realize the reorganization, supplement, elimination and optimization of resources. The closed-loop process of human resource management is realized through the above four combination modes, and

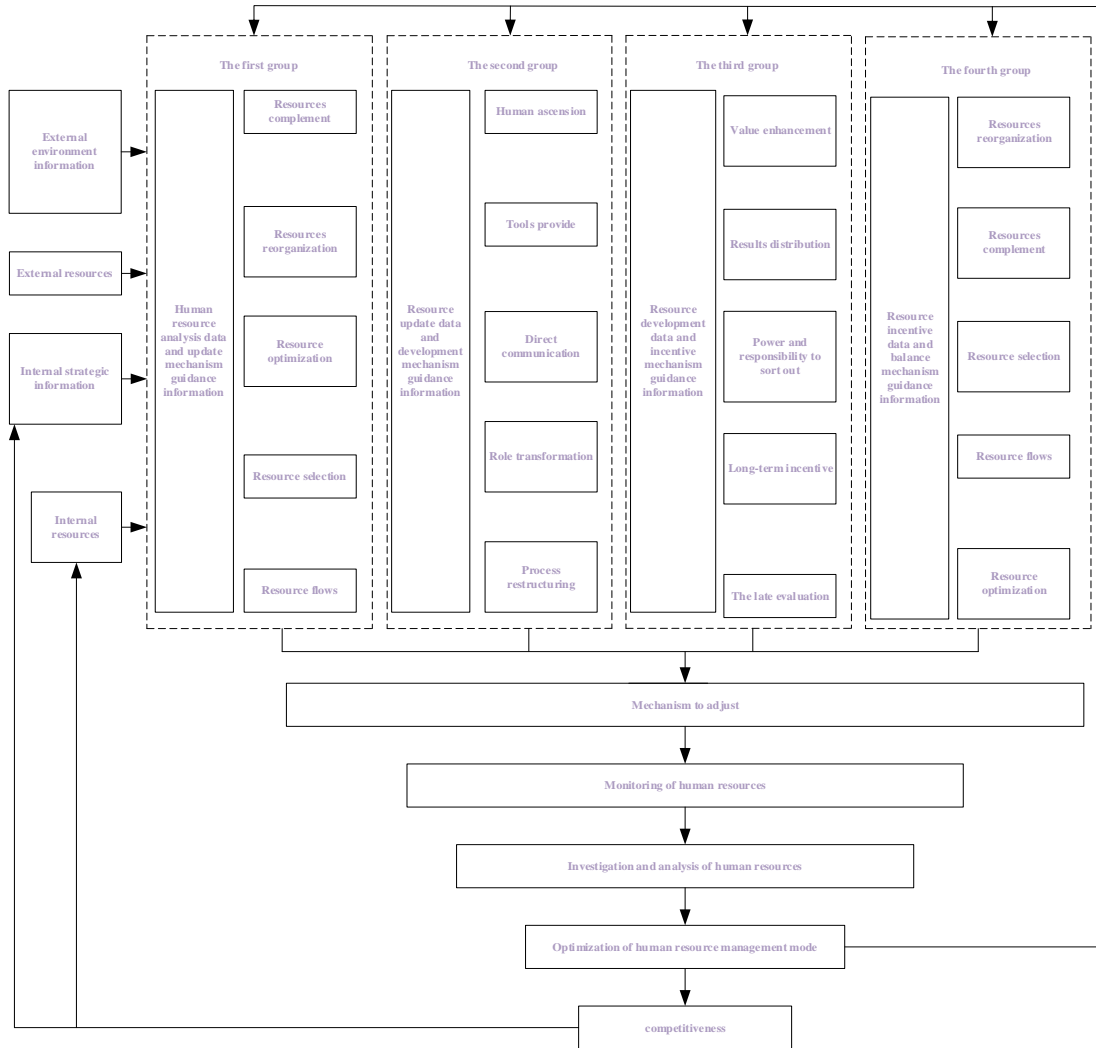the specific process model is shown in Figure 1.

Figure 1: Closed-loop flow chart of human resource management

As you can see from Figure 1, all the components in the process model correspond to the business operational actions and management actions in human resource management. For example, the first group of key data and information combination corresponding to the realization of management actions are quality evaluation, recruitment selection, resignation processing, post transfer and job analysis; The second group of key data and information combination corresponding to the realization of management actions are training management, daily work, electronic publications, career planning and cultural construction; The third group of key data and information combination corresponding to the realization of management actions are salary and welfare management, reward and punishment, share and option allocation, logistics service guarantee and authority allocation, etc. The fourth group of key data and information combination corresponding to the realization of management actions are contract management, system management, complaint management, dispute management and employee opinions. It can be seen that the closed-loop mode of human resource management based on information technology belongs to the process of optimization and improvement, and is a platform with strong comprehensive performance.

4. Effect analysis of human resource management closed-loop model based on information technology

Under the closed-loop mode of human resource management based on information technology, the performance of human resource management will be significantly improved, which can be specifically divided into five points: First, the working efficiency of human resource management department will be significantly improved. In human resource management, wage calculation and processing, employee information management, attendance and vacation processing and other business contents are all factors affecting the work efficiency of human resource management department. The application of information technology to human resource management can help human resource managers to free themselves from these routine tasks, which are often time-consuming and error-prone. Information technology advocates the self-service of employees. If there is a big change in the personal information of employees, employees can use the information technology platform to update the information. Similarly, the daily administrative affairs (such as vacation application, training, reimbursement, etc.) can be handled by the information technology platform. In this way, the workload of human resource managers can be reduced, the speed and quality of data collection and update can be improved, and it is possible for human resource managers to shift their work focus to the strategic level. Second, the business process of human resource management department will be improved. After being liberated from routine work, human resource managers should shift the focus of work to the business processes of human resource operation system (such as performance management process, recruitment process, employee career planning, employee training and development process, separation process, etc.), and constantly refine and standardize them. In addition, with the help of information technology, human resource management information is processed centrally, business processes are independently optimized, and the internal connection between operation processes and business processes is improved. Moreover, the work functions of the human resource management department have been comprehensively covered, and the independently optimized business process can be reflected in the whole system. Staff retirement, cadre appointment and removal, resignation, deployment and other daily operations in human resource management can be completed in accordance with the working process paradigm. The use of information technology network platform can also be completed roster production, leadership approval, statistical statements and other processes. Third, the cost of human resource management will be reduced. Take employee training as an example, the use of information technology can be used to conduct real-time online training for employees, which can not only save time, but also avoid the cost of training sites and reduce the cost of training. For another example, in the aspect of evaluation, the use of information technology can avoid the paper submission of employees' work report, but can be directly transmitted to the supervisor online, and the supervisor can conduct online evaluation, supervision and guidance, so that the evaluation cost can be greatly reduced. Fourth, the participation of human resource managers can be improved. The top management of the company can use information technology to grasp the dynamics of human resources in real time, such as employee performance, employee status and human resource management cost. At the same time, the decision-making personnel can make decisions online according to the human resources management indicators. For middle-level managers such as line managers, they can use the human resource management information technology platform to manage their employees. For example, within the scope of authorization, they can check the personnel information of employees online, and at the same time, they can review and approve the procedures of employees' vacations, training and dimission online. In addition, for employees, the platform can be used to understand the company's internal recruitment information, rules and regulations, salaries, vacation application, personal attendance

and leave, etc. Fifth, it can help companies retain talent. Brain drain occurs in most enterprises, and there are many reasons for this phenomenon, such as salary, leadership fairness, working environment, personal prospects, training opportunities, etc. In order to reduce the occurrence of such problems, enterprises can make use of information technology to improve the objectivity of employees and selection, avoid the influence of subjective factors, highlight the fairness principle of enterprises, and then retain talents. At the same time, this transparent and simplified way of information acquisition can improve employees' satisfaction with human resource management services, improve the cohesion of enterprises, and achieve the effect of attracting and retaining talents. To sum up, the closed-loop model diagram of human resources is shown in Figure 2.
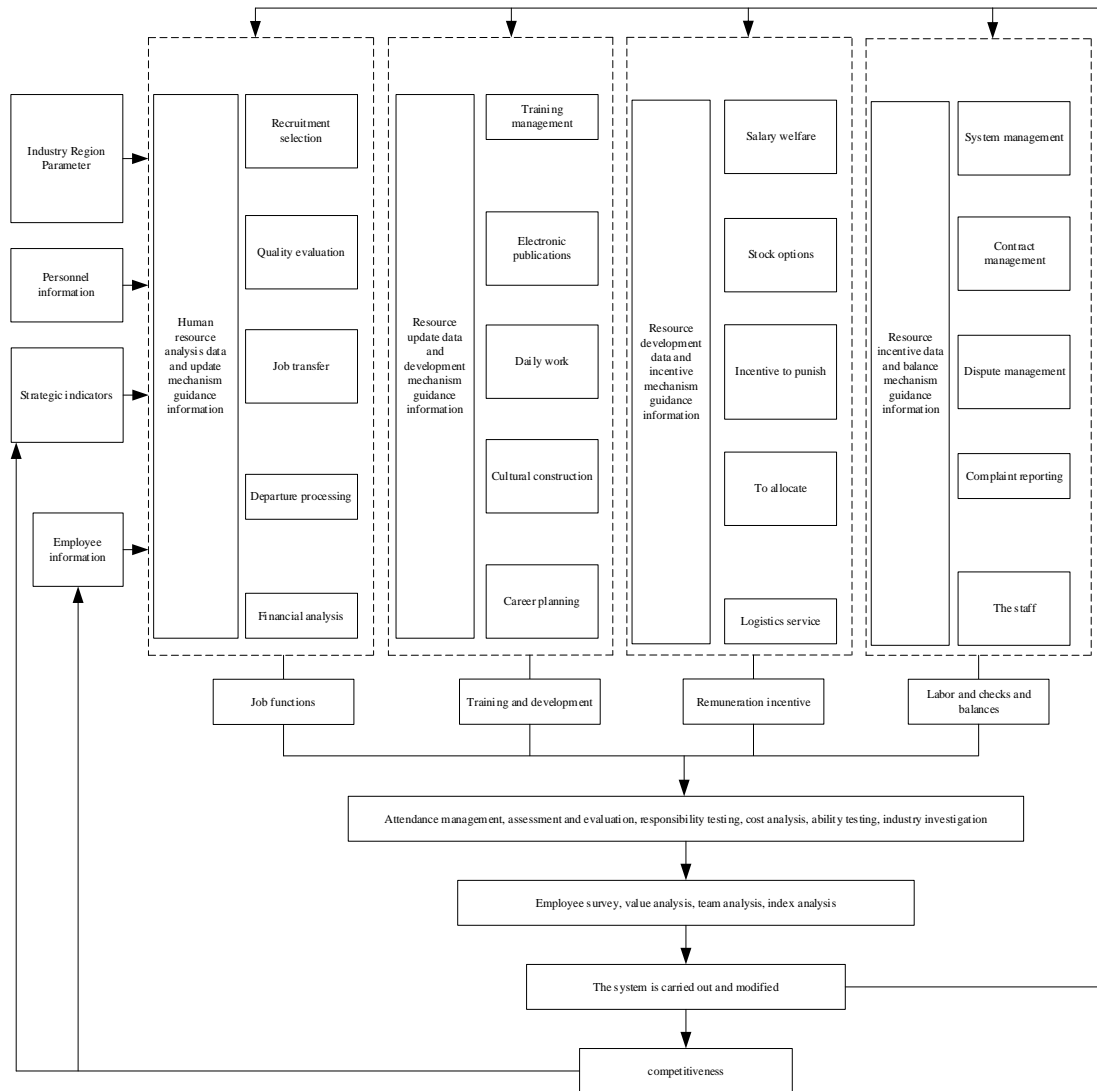

Figure 2: Closed-loop model of human resource management

In order to further test the effect of human resource management closed-loop mode based on information technology, this paper applied the mode in Company B, and made a comparative analysis of the effect before and after the application, as shown in Table 1.

It can be seen that before the application of HRM closed-loop mode, work efficiency, business volume, management cost, productivity, talent loss rate are not ideal, but after the application of HRM closed-loop mode, it has been significantly improved, affirming the feasibility of the application of HRM closed-loop mode based on information technology.

Table 1: Comparison of the effect before and after the application of HRM closed-loop mode

	Before the application	After the application
The work efficiency	Low, many administrative affairs	Gao, no longer bothered by administrative matters
Volume of business transactions	Generally, a lot of manpower and material resources are needed for business management	High, the information system can optimize the business process autonomously
Management cost	High, there are site expenses, evaluation of internal friction, etc	Low, direct online training, to avoid the cost of renting the site
participation	In general, there are various affairs, difficult to timely participate in the evaluation and decision-making of various affairs	High, able to participate online
Talent turnover rate	Generally, employees cannot obtain more benefits and information from the enterprise through favorable channels, and the transparency is not high	Low, employees can get to know the company information through online means

5. Summary

To sum up, this paper firstly explains the basic situation of information technology and human resources, and clarifies the basic information of information technology and human resources. Secondly, it analyzes the changes of human resource management mode under information technology and gives the optimized closed-loop process of human resource management. Finally, this paper analyzes the effect of the closed-loop mode of human resource management, affirms the superior effect of the closed-loop mode of human resource management under information technology, gives the diagram of the closed-loop model of human resource, and applies it in A company. The results confirm the feasibility of the mode again, which can promote the development of the company.

References

[1] Zhang Lili. Discussion on the Importance of Human Resource Management Strategy [J]. Science & Technology Economics Guide, 2020, 28(17):217.

[2] Zhang Jingxuan, Wang Zhaohui. Analysis on the status quo of human resource management theory research [J]. Human Resources, 2020(02):26.

[3] Wang Jingping. Changes and Challenges of Enterprise Human Resource Management in the Digital Era [J]. Shopping Mall Modernization, 2020(24):61-63.

[4] Liu Qing. Discussion on the New Trends and Strategies of Human Resource Management in the Era of "Internet +" [J]. Business Fair Economics, 2020(14):93-95.

[5] Wan Zhihong. Analysis on the application of informationization in enterprise human resource management [J]. Business News, 2020(36):189-190.

[6] Li Xinlong. Research on enterprise human resource management and practical application [J]. China Business Theory, 2020(23):131-132.

[7] Gao Limei. Feasibility Analysis of Human Resource Management Using Information Technology [J]. Human Resources Development, 2018(08):70-71.

[8] Zhang Meng. Analysis on the Application of Computer Information Technology in Human Resource Management [J]. Digital World, 2020(04):224

[9] Zheng Zhangru. Improving the effectiveness of human resource management with information technology [J]. Human Resources, 2019(20):127.

[10] Yang Yifan, Liu Xuesong. Research on enterprise human resource management based on information technology [J]. Small and medium-sized enterprise management and science and technology (next ten), 2020(04):5-6.