Retraction

Retraction: Research on Optimization Plan of Enterprise Employee Training under the Background of Big Data (J. Phys.: Conf. Ser. 1852 022004)

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Research on Optimization Plan of Enterprise Employee Training under the Background of Big Data

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Abstract. This article takes SMEs as the research object, and aims to study the problems and optimization schemes of SME employee training under the background of big data. This article uses a combination of literature reading, statistical analysis and questionnaire survey to investigate the employees of a certain company's specific production base, and conducts research and analysis on the company's employee training management. This article first introduces some concepts of modern enterprise training, and then analyzes the status quo of enterprise employee training. Through the interviews and questionnaires issued to the employees of the company, it analyzes the problems and causes of the company's employee training management, and provides optimized solutions for the company's employee training. The experimental results of this paper show that the optimization of corporate employee training programs under the background of big data plays a positive role in corporate management. It improves employee enthusiasm and work commitment, and increases the number of corporate trainings.

Keywords: Big Data, Enterprise Employee Training, Optimization Plan

1. Introduction
The current enterprise development is facing very severe difficulties and challenges [1]. In the modern globalized economic environment, how to ensure that companies obtain a dominant position in market competition has become a problem that many companies need to study at present [2]. More and more Chinese companies are aware of this. In an era where people regard human resources as the "second source of profit", companies have brought human resource development to the strategic level, and regarded the training and development of human resources as an important task for enterprise development [3-4].

At this stage, many small and medium-sized enterprises integrate the educational resource systems distributed within the enterprise to improve the training effect, so that the enterprise avoids blind or temporary training, and makes the training systematized, durable and practical [5-6]. A mature education system is not only an effective tool to develop human resources, but also an important part
of the company's employee welfare [7-8]. Ensure the continuous and effective implementation of the education project, promote the company’s employees to quickly improve their professional skills, encourage employees to understand and familiarize themselves with the company’s strategy and corporate culture, promote employees’ sense of identity with the company, cultivate more useful talents for the company, and effectively improve the company’s development experience The problem of talent shortage [9].

The innovation of this article is to start with relevant training management theories, and based on the research on the effectiveness of education, comprehensively investigate and objectively diagnose the problems and root causes of current company employee training management, and analyze the background based on big data. Next, the optimization plan of training management is proposed. Each link of the training project is an entry point to provide optimization suggestions for the company’s employee training plan [10].

2. Optimization Methods for Enterprise Employee Training under the Background of Big Data

2.1 Big Data
Big data, or mass, refers to the amount of data involved that is too large for humans to intercept, manage, process, and interpret information within a reasonable time. The first citation of the term big data can be found in Nutch, which is an open source project of apacheorg. At that time, big data was used to describe web searches of large data sets that needed to be processed or analyzed simultaneously to update the index. With the release of Google MapReduce and FileSystem (GFS), big data is no longer just used to describe large amounts of data, but also includes the speed of data processing. The size of big data changes frequently. Since 2012, the size of a single data set has changed from a few megabytes (TB) It can range from several terabytes. Since the 1980s, the capacity of modern technology to store data has doubled every 40 months; since 2012, 2.5 exabytes of data have been created globally every day.

2.2 Enterprise Employee Training Model in the Context of Big Data

(1) Systematic training mode
In order to implement this model in worker training, it is first necessary to formulate practical training policies, clarify training needs and training objectives, and then carry out training activities in accordance with the training policies. After the training activities are over, the training results should be evaluated, and the new training process should be improved on the basis of the previous training results at the beginning of the next training to improve the training effect. Generally speaking, the process of systematic education is clearer than other education methods, and it pays more attention to evaluating and evaluating training results.

(2) Learning organization model
The learning organization model originated from "the fifth art and practice of cultivating learning organizations". This educational model regards an organization as an organization that continuously learns and improves its development capabilities. The organization follows the principles of the "five scientific departments" mentioned in the book, namely, systematic thinking, self-overcoming, shared vision, intelligence model and group learning. He believes that learning should continue to evolve, and always be ahead of the organizational individuality related to learning. Through this learning model, the company will transform the initial mandatory improvement of employee skills into guiding employees to learn independently, creating an atmosphere of continuous learning, and emphasizing the creativity of corporate organizations.
(3) Consultative organization model
This is a question-and-answer training mode, which can usually be divided into internal coaching and external coaching training. The internal consultation function is the trainer's answer to the questions raised by the trainees, which is usually used to train young employees. The internal coaching training model not only allows young employees to understand the company and work as soon as possible, but also improves their work efficiency and enhances their sense of belonging. The external consultant training model is mainly to solve certain problems that the company cannot solve. The company hired a professional team to ask them for help. This kind of education model complements and strengthens the internal tutoring education model.

2.3 Research Methods for Optimization of Employee Training

(1) Literature research method
Before writing this article, read a lot of literature related to training and career development to consolidate the theoretical foundation. These documents roughly include journals, articles, reports and various company rules and regulations. After clarifying the topic selection, the author completed the literary research in five steps: one is to select the topic clearly, the other is to collect data; the third is to classify useful information; the fourth is to write an article; the fifth is to analyze the theoretical part of the article must be improved and Enrich the company.

(2) Statistical analysis
After consulting, collecting and summarizing the literature, the author used statistical classification methods to analyze and discuss this group of materials and data, and summarized its laws and characteristics; find out the root causes, and find out a series of problems and main problems in the training process. The reason provides a basis for the problems encountered in the KP training process.

(3) Questionnaire survey method
This article mainly uses questionnaire survey and data aggregation methods. Provide questionnaires to respondents to understand their thoughts and obtain the information they need. At the same time, several issues in the questionnaire summary process were analyzed. This questionnaire was mainly distributed at his own expense. The author designed the questionnaire, distributed and collected it to obtain the information he wanted. The object of the author's investigation is the company's employees, and then issue questionnaires to collect and measure the company's education status, training needs and training impact information, and then analyze and highlight the current problems.

3. Construction of Employee Training Model under the Background of Big Data
First, we need to create corporate human resources data. Every employee of the enterprise must be recorded in the large-scale database of the enterprise in the form of data, including basic information, skills and various qualities of the workers. These data will be updated gradually over time, rather than static, providing the most basic data support for enterprises to carry out training analysis. Secondly, companies must have a strategic guiding principle for training. The long-term effect of training determines that education is not a matter of overnight. Therefore, business leaders must take a long-term perspective and be willing to invest in human, material and economic resources. Third, use big data to do a good job in company organization analysis, job analysis, and employee analysis to obtain training content for employees and the company. Through a detailed analysis of the training needs of employees, the employees’ careers and the company’s training needs are reasonably combined, so that employees are suitable for choosing appropriate training based on the quantitative results of the needs analysis. Fourth, select training methods based on the results of big data analysis, combined with traditional employee training methods such as selection methods. Design methods for employees to receive better training. Fifth, evaluate and analyze the training results, enter the analysis
results into a large human resources database, and notify the large database to guide the next training workers.

As a result, we can establish a corporate employee training model in the context of big data, as shown in Figure 1.

![Enterprise employee training model in the context of big data](image)

**Figure 1.** Enterprise employee training model in the context of big data

### 4. Analysis of Corporate Employee Training in the Context of Big Data

**4.1 Analysis of the Status Quo of Enterprise Employee Training**

Based on the survey questionnaire for the employees of the company, the results of the survey are summarized and analyzed as follows.

(1) The vast majority of employees believe that training is necessary, indicating that most employees are aware of the importance of training. Regarding whether the company has a complete training system, only 64% of employees know it, and a large part of the employees do not know it well. In addition, about 56% of the company’s employees have only participated in about 2 trainings in the annual training. The employees who have participated in 3-4 trainings accounted for 25% of the total number. A very small number of employees have participated in the training 5 times. Of the above, only 8%, and the rest are all employees without training. The result is shown in Figure 2:
Figure 2. Results of the number of employee training

(2) The purpose of employee training and training requirements are shown in Table 1:

| Training purpose | Create value | Long-term development | Career Development |
|------------------|--------------|-----------------------|-------------------|
| Percentage       | 68%          | 29%                   | 3%                |

| Training needs   | Not expressing training demands | Neutral |
|------------------|---------------------------------|---------|
| Percentage       | 56%                             | 43%     | 1%      |

Table 1. Employee training objectives and demand results

From the data analysis in the table, it can be concluded that 68% of the respondents think that the main purpose is to create economic value for the company, and the purpose of task training is to account for 29% of the company's long-term development. A very small number of respondents think it is. In order for employees to obtain good career development, the data is 3%. In addition, 56% of employees have never expressed their training demands. Among 43% of employees who have expressed training requirements, 3% have submitted applications to the company, 6% have chosen to verbally respond to the human resources department, and 34% of employees have reported their training needs to their department leaders.

(3) Investigate from the perspective of the impact of training on employees' work input and training effects.

According to the results of the questionnaire analysis, 70% of the respondents believe that the training is helpful to improve work efficiency; 42.5% of the respondents believe that the training can understand the working relationship between various departments within the company; 33% of the respondents believe that the training link can sort out their work content and knowledge structure; 80% of the respondents believe that through training can improve work enthusiasm. 68% of the respondents believe that job training has a direct impact on employees' job input.

Analysis of the effectiveness of training content and training methods

Interviews found that employees generally believe that companies do not pay enough attention to employee career development and rarely do career planning for employees. Therefore, the training content is not closely related to the individual development of employees, and the participants' enthusiasm for participation is low. The design of the training program is relatively random, and the content of the program is not consistent with the work content and planning of the employees, which does not play a good role in improving the work performance of the employees. There is no systematic design of training courses, and the training effect is not good. It is common to emphasize skills training rather than comprehensive ability training. The training method is relatively traditional, the method is single, and there is no innovative method in the cliché.

4.2 Analysis of Enterprise Employee Training Optimization Plan

(1) Clarify training objectives and principles

Since the establishment of the company, it has adhered to a professional and export-oriented development strategy. Therefore, improving professional skills and management is the core of the company's training function positioning. The goal of employee training is to achieve the best results for employees to improve their work performance, and to achieve their self-realization. According to the current internal and external environment, development status and strategic goals of the company, as well as employees' problems at work, comprehensive consideration should be given to determine its training goals: first, long-term goals, combining training with corporate business strategies and
employees’ personal goals, Establish a win-win training system for both the company and the individual; the second is the short-term goal, with the company’s development strategy as the guiding direction, to make the training work systematized, standardized, more layered and targeted, and comprehensively improve the comprehensive quality and functions of employees, and improve the competitiveness of the company.

(2) Establish an innovative enterprise training concept

The problem of conservative and conservative corporate training concepts exists in Chinese enterprises, which is common in enterprises, and enterprises cannot avoid them. When the company’s leadership conducts employee training, they are pursuing short-term training benefits. It is difficult to develop employee training and corporate strategy, let alone the improvement of employees’ personal capabilities. Because the impact of training effects on corporate performance is not intuitive, some managers even regard employee training as an activity that does not pay off. In fact, the results of employee training do not only look at the capital investment, but the key lies in the importance of the leadership. Company leaders must first innovate in the concept of training and regard training as an investment with the greatest return.

(3) Pay attention to the application of corporate strategy in employee training

A powerful way to develop corporate human resources is to carry out training. In the process of corporate management, corporate training is gradually transferred from the gap to the special center, which serves as the initiator for the rapid growth of corporate intelligence. Training work requires effective cooperation with the development strategy of the company, so that employees can see the future and have the motivation to work; the company can gradually become stronger and gain greater benefits. The company's development strategy is to adhere to a professional and export-oriented development strategy. Corporate training must not only conform to the development strategy, but also correspond to the personal development of employees, so improving professional skills and management level should become the core of corporate training function positioning.

(4) Clarify job requirements and determine training content based on job content

The ultimate goal of employee training is to improve employees' working ability and performance. If the job content of the job is not clear, the training direction and content cannot be determined, and corporate training will be blind. The trainer doesn’t know what to train, and the trainee doesn’t know what to learn. It is naturally impossible to improve performance. Therefore, the company must first determine the job requirements, construct the competency of on-the-job employees from the job description, analyze the content of the work, clarify the basic abilities and key abilities that employees need to have, and determine the training content and training courses.

(5) Carry out stepped training centered on employee development.

With the development of human resource training, the employee-centered concept in corporate training has become more and more common. The active participation of employees in enterprise training determines the quality of the training effect. If an enterprise wants to fundamentally improve the effect of training, it must integrate the career development channels of its employees. Therefore, the corporate training design needs to integrate the employees' own work and development. The corporate training programs and content should meet the needs of employees' individual development and work ability improvement, so as to obtain the support and response of the employees.

(6) Appropriately increase the training income of employees

After employees have participated in the training of some projects, if they have no chance to apply the skills they have learned to work or apply them to work, it will significantly improve work performance and work commitment, but they have not been rewarded and affirmed by the organization, and there is
no salary and position promotion. Reflect, then employees will have a negative attitude towards training, so the training effect will not reach the expected goal. Therefore, when assigning jobs, it is best to consider the degree of matching between employee training items and job content, so that people can match their posts and make the best use of their talents, forming a virtuous circle.

5. Conclusions
This article introduces that the main problem of employee training management is the incomplete training process. Due to the lack of a complete training process specification, employee training will have problems such as insufficient training requirements, lack of training plans, and lack of effectiveness evaluation. In response to this main problem, the paper also proposes an optimization plan for establishing a standardized training process. The content of the plan includes clarifying job requirements, carrying out stepped training with employee development as the center, and appropriately increasing employee training benefits.

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References
[1] Amor-Esteban V, Galindo-Villardon M P, Garcia-Sanchez I M, et al. An extension of the industrial corporate social responsibility practices index: New information for stakeholder engagement under a multivariate approach[J]. Corporate Social Responsibility and Environmental Management, 2019, 26(1):127-140.
[2] Kimiloglu H, Ozturan M, Kutlu B. Perceptions About and Attitude toward the Usage of E-Learning in Corporate Training[J]. Computers in Human Behavior, 2017, 72(JUL.):339-349.
[3] Halbouni S S, Obeid N, Garbou A. Corporate governance and information technology in fraud prevention and detection[J]. Managerial Auditing Journal, 2016, 31(6/7):589-628.
[4] Dodson M N, Kitburi K, Berge Z L. Possibilities for MOOCs in Corporate Training and Development[J]. Performance Improvement, 2016, 54(10):14-21.
[5] Wang Y, Kung L A, Byrd T A. Big data analytics: Understanding its capabilities and potential benefits for healthcare organizations[J]. Technological Forecasting & Social Change, 2018, 126(JAN.):3-13.
[6] Zhang Y, Qiu M, Tsai C W, et al. Health-CPS: Healthcare Cyber-Physical System Assisted by Cloud and Big Data[J]. IEEE Systems Journal, 2017, 11(1):88-95.
[7] Cai H, Xu B, Jiang L. et al. IoT-Based Big Data Storage Systems in Cloud Computing: Perspectives and Challenges[J]. IEEE Internet of Things Journal, 2017, 4(1):75-87.
[8] Xu W, Zhou H, Cheng N, et al. Internet of Vehicles in Big Data Era[J]. IEEE/CAA Journal of Automatica Sinica, 2018, 5(1):19-35.
[9] Anisinya A. Organizational barriers to employee training and learning: evidence from the automotive sector[J]. Development and Learning in Organizations, 2018, 32(3):8-10.
[10] Lau K W, Lee P Y. Designing employees' training by immersive serious games? A study of digital natives' satisfaction, perception and expectation in corporate training practices[J]. Development & Learning in Organizations, 2016, 30(4):6-8.