Application of Career Management and Competency Model in the Construction of New Employee Training System in Enterprises

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Abstract. New employees are at the beginning of the career path and the bottom of the business layer. They not only need to master basic job skills, but also need to know the corporate culture, corporate value, system regulations, development strategy, organization and other information of their enterprises. From the perspective of career management and competency model, combined with the characteristics of new employees and integrated with modern scientific management theory, this paper optimizes, and constructs employee career management system and new employee training system based on competency model. This paper introduces competency model, and combines competency model with employee career management system, and puts forward a five-dimensional framework for evaluating the training needs of new employees, which has achieved certain results in practice and improved the training effect of new employees in enterprises.

Keywords. Career management, Competency model, New employee training

1. Introduction

The training of new employees is an important part of the enterprise training system, which plays the role of guidance, standardization and infiltration. At this stage, the training of new employees should have different emphases according to the strategic development requirements and corporate culture connotation of the enterprise, and the training system should be adjusted appropriately according to the development stage of the enterprise. The education and training of employees is always a part of enterprise management, and it is also an important part of enterprise HRM (human resource management). Through career management, enterprises enable employees to obtain career satisfaction; Through the training of employees, their comprehensive quality and working ability can meet the needs of enterprise management now and in the future [1-2]. The construction of employee career management training system can effectively help employees find the right direction in the workplace and enter the working state invincible, and can make employees in the enterprise work together to create greater economic benefits for the enterprise. Therefore, enterprise HRM departments should conduct in-depth research on employee career management training.

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Career is related to a person's career development, but it is not the same as career development. Career includes a wider range, which not only refers to the changing process of work experience in time and space but also includes personal subjective attitudes and concepts towards work. Vogtenhuber [3] holds that the job performance of employees in an organization depends not only on their personal abilities and values but also on their organizational atmosphere and environment. Fischer et al [4] mainly studied the basic components of organizational behavior and hold that individual behavior will be influenced by demand, motivation, attitude, personality, and skills. Theoretically speaking, the research on the recruitment and training system based on the competency model is still in the primary stage, and more research at home and abroad is still in the construction of the competency model. Zawadzki et al [5] put forward that the characteristics of an entrepreneur's competence are the combination of achievement, influence, and thinking, and the attitude and guidance level of entrepreneurs to solve problems are related to organizational control, personal maturity, and whether they are considerate of others. Vaughan et al [6] mentioned that the matching between people and posts can ensure the efficient operation of enterprises, and it is also the basis for enterprises to create benefits. Accurate matching between people and posts can provide a good guarantee for enterprise job optimization.

The training of new employees is an important part of the enterprise training system, which plays the role of guidance, standardization and infiltration. At this stage, the training of new employees should have different emphases according to the strategic development requirements and corporate culture connotation of the enterprise, and the training system should be adjusted appropriately according to the development stage of the enterprise. In China, because the research on career management started late and lagged behind, it has not developed into a fixed theoretical system of career development. With banks, especially small and medium-sized joint-stock commercial banks as the organizational background, there are even fewer practical research results on career management, and there are almost no operational research results [7-8]. Based on the author's practical work, this paper makes a detailed study of relevant theories, and studies career management with the background of career management of bank employees as the basis of modern human capital theory, learning theory and modern career management theory, and constructs a training system for new employees in enterprises based on competency model.

2. Research Method

2.1. Optimal Design of Employee Career Management System

Enterprise's career management refers to the enterprise's career demand strategy, career change plan and career path according to its own development goals and employees' development needs, and take necessary measures to implement them, so as to realize the unity of enterprise goals and employees' career development goals and the common development of enterprises and individuals. There are two kinds of career management, one is organizational career management, and the other is self-career management. By strengthening the career management of employees, the rationality of the company's resource allocation can be improved. According to the different characteristics of different employees, put the right people in the right positions to meet the requirements of enterprises and the needs of development. And make continuous progress in the cycle

of planning-realization-re-planning-re-realization, and gradually achieve your career goals [9]. An enterprise is an organization that provides a career development channel for employees, and promotes the development and growth of the enterprise through the growth of employees in the enterprise.

In the construction of training system based on career management, the first thing managers need to do is to investigate and analyze the professional needs of employees. After completing the demand survey, managers should combine the information and data of the survey to analyze the development needs of employees, classify them according to the different contents of the needs, prepare a training demand report, and design targeted training programs on this basis. Targeted training courses effectively enhance the enthusiasm of employees to participate in training, meet the needs of work and professional development, and lay the foundation for employees' career development. This method is helpful to promote employees' conscious participation in training, to improve their own ability, and to optimize the current HRM work of banks.

For any enterprise, only by establishing the concept of career development and management can we successfully build a perfect career management system [10]. Employees and enterprises are the main bodies of career management planning. The former bears the function of personal career planning, while the latter bears the function of enterprise career management. They belong to the relationship of mutual coordination, integration and interaction, and career planning is jointly promoted by them. The optimal design of this paper is to help enterprises build employee career management system, formulate a management system that conforms to the company's development and personal growth of employees, broaden the career development channels and growth space of employees, explore the potential of employees and cultivate outstanding talents.

Specifically, career management is based on the development of electronic information system and the optimization of career development ladder structure; Career management process design is from career planning to career development and management, career evaluation and feedback; The guaranteed system of career management is mainly from the aspects of HRM, organizational culture and organizational system. The framework of enterprise career management system is shown in Figure 1.
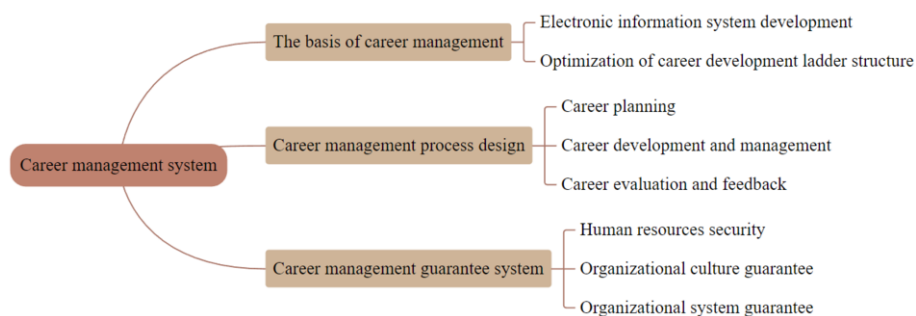

Figure 1. Framework of career management system.

In practical operation, the training system based on career planning is established on the basis of fully analyzing the development strategy of enterprises and the needs of employees' career planning. Through the training ability play mechanism, some employees have made outstanding contributions in their posts and been promoted or transferred to other posts, so they need to be equipped with a training system

corresponding to new posts; If employees' abilities are not well developed, it is necessary to sum up experiences and lessons in time, find out the reasons and conduct more targeted training.

To meet both the strategic development needs of enterprises and the development needs of employees' career planning at all stages, enterprises need to design a set of employee education and training system that can meet the common needs of enterprises and employees and promote the steady development of enterprises, which is the employee training system based on career management. According to the training and evaluation results of a certain period, we will further plan the enterprise strategy and the career path of employees, forming a virtuous circle [11]. Therefore, according to the different nature of each position in the enterprise, we provide employees with multiple career development channels. Figure 2 below shows the post hierarchy and sequence matrix of enterprise employees.
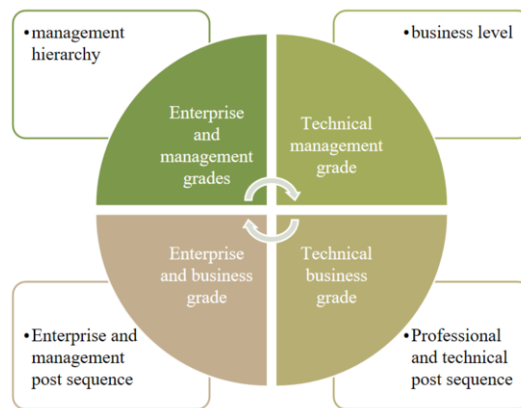

Figure 2. Post hierarchy and sequence matrix of enterprise employees.

New employees are at the beginning of the career path and the bottom of the business layer. They not only need to master the basic job skills, but also need to know the corporate culture, corporate value, system regulations, development strategy, organization and other information of their enterprises. Therefore, the design of pre-job training focuses on the training of basic corporate information and post skills.

Employees in technical sequence will increase the proportion of specialized business training and knowledge updating training, while employees in management sequence will strengthen training in business processes, management theory, laws and regulations. Other employees are relatively stable, and their training needs for work experience and business skills are low. Instead, they can serve as training teachers to impart their experience to young comrades.

2.2. Optimization of New Employee Training System Based on Competency Model

With the different nature and development stages of enterprises, the training methods and contents of new employees should be different. The traditional training work is not effective in progress, and employees lack practical opportunities after receiving ability training, which leads to the failure to improve their practical ability and affects the development of their professional ability. Therefore, in the construction of the training

system, bank managers should pay attention to setting up the corresponding support system, so that employees have the opportunity to practice the training content and really improve their skills and professionalism. Through training, we can improve the fit of talents' suitability and competence. The induction training for new employees is an important part of the training system. With the basic sequence of competency model as the training guide, the goal of guidance, standardization and penetration can be achieved through training demand analysis and curriculum design, so as to reduce the waiting and running-in costs for HRM of enterprises.

We divide competence into four levels, namely, surface competence and central competence [12]. Surface competence refers to the ability of the upper two layers to be easily discovered, developed and cultivated. Central competence refers to the core characteristics and characteristics of implicit determination and balance of difficulty in the lower two layers. Combining with the specific post, we can divide the competency into two categories: door-to-door competency and district-based competency. Threshold competency is the most basic quality that everyone needs in their work, and it is a competency that cannot be distinguished from outstanding performers. Competency model refers to the synthesis of competency elements needed to do a specific task well. It mainly includes two elements: the name of competence, the key characteristics of defining competence and the grade of behavior index. Competency model provides a success model for a specific organizational level, job or role, and reflects all the important behaviors, skills and knowledge that affect individual success in a given job.

The core content of competency-based training needs assessment is the process of gradually developing, applying and developing individual employees' competence through training under the premise of combining individual employees' objectives with corporate strategic objectives, helping employees to continuously improve their work performance level, thus achieving corporate objectives, and constantly adjusting and circulating after the enterprise formulates new strategic objectives. The selection and setting of training demand evaluation indicators are mainly through the comprehensive use of questionnaires, behavioral event interviews, expert groups, evaluation centers and other methods to collect and analyze relevant information. In the process of extensively consulting relevant literature, this paper constructs a five-dimensional framework for evaluating the training needs of new employees in enterprises from five dimensions: professional knowledge and technology, personal quality, management and control ability, self-management and development, and teamwork, as shown in Figure 3.

Figure 3. Five-dimensional framework for evaluating the training needs of new employees.

To build a competency model for new employees, we need to choose a suitable competency model construction strategy according to the characteristics of new employees. To scientifically build the competency model of new employees in enterprises, this paper will follow the idea of logical derivation and introduce AHP (analytic hierarchy process) to solve the problem of weight distribution of competency indicators, and finally establish the competency model. The process of competency model construction is shown in Figure 4:
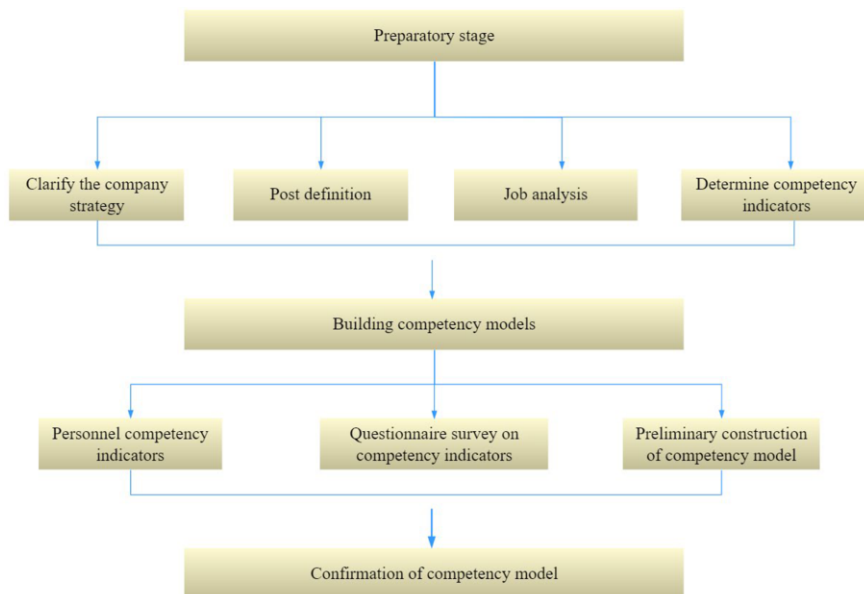

Figure 4. Competency model construction process.

The calculation process involved in AHP depends on the factor dimension, which is generally not complicated. The main calculation processes involved are as follows:

Establish a decision matrix:

$$A = \begin{bmatrix} a_{11} & \cdots & a_{1n} \\ \vdots & \ddots & \vdots \\ a_{m1} & \cdots & a_{mn} \end{bmatrix}, \quad a_{ij} > 0, a_{ii} = 1, a_{ij} = \frac{1}{a_{ji}} \qquad (1)$$

Calculate the maximum eigenvalue λ_{max} of the decision matrix and its corresponding normalized eigenvector $W = [w_1, \cdots, w_n]^T$.

$$AW = \lambda_{max}W$$
$$\lambda_{max} = \sum_{i=1}^{n} \frac{(AW)}{nW_i} \qquad (2)$$

Consistency test, calculating consistency ratio CR:

$$CI = \frac{\lambda_{max} - n}{n - 1}$$
$$CR = \frac{CI}{RI} \qquad (3)$$

Among them, RI can be found in the cross-reference table, and if $CR < 0.1$, the consistency test is passed.

Based on the established competency model, by determining the general idea of training system construction, this paper analyzes the training needs of employees based on competency quality, the content setting of the training system, the specific implementation and effect evaluation of the training system, and ensures the sustainability and popularization of the training system for grass-roots operating employees of the company.

First of all, combined with the competency requirements, through the evaluation of the grass-roots operating staff evaluation center, help employees have a more comprehensive understanding and understanding of themselves, and confirm that the development direction of employees is skill posts or management posts. Secondly, analyze the quality gap of employees through the evaluation results report, and organize employees to learn knowledge such as improving leadership and problem-solving ability. Finally, make the core employees improve their working ability step by step.

3. Effectiveness Analysis

In this questionnaire survey, 100 questionnaires were distributed in H company, and 96 questionnaires were recovered, with a questionnaire recovery rate of 96%. The survey targets were all new employees who participated in induction training in various departments. In the process of this questionnaire survey, factors such as gender and age of employees are considered as much as possible, so the characteristics of this survey object can basically represent the characteristics of training performance of new employees in enterprises.

Four samples were randomly selected from the valid questionnaires collected, and the training performance scores of new employees were calculated by fuzzy comprehensive evaluation method. The data were imported into SPSS22.0 software, and the final score of fuzzy comprehensive evaluation of employee training performance was obtained by calculation, and the correlation test was carried out with the statistical scores obtained from the questionnaire survey. The results are shown in Table 1.

Table 1. Statistics of competency score of randomly selected samples.

Questionnaire serial number	Statistical score of questionnaires	Comprehensive evaluation score	Error/%
5	83	84.79	2.16
8	82	81.07	-1.13
13	78	80.97	3.81
20	88	87.67	-0.38

The correlation results show that the error between the statistical score of the questionnaire and the score of the new employee's training performance calculated by fuzzy comprehensive evaluation is within the allowable range, and the two results have a high degree of correlation, which also shows that the index selection, weight distribution, questionnaire design and score calculation in this paper are scientific and reasonable.

After constructing the competency model, we need to find a standard according to the competency model, that is, how many points can be qualified for the post through scoring assessment. We randomly selected 20 quality engineers who were rated as Class C (internal rating of H Company, which is equivalent to good) by the department of H Company, and asked a panel of five experts to score them (the full score of each indicator is 100) to determine the score segment that meets the post qualification.

Multiply the score by the weight of each competency index, and classify and summarize the assessment scores of Class C employees under the above competency model, as shown in Figure 5:
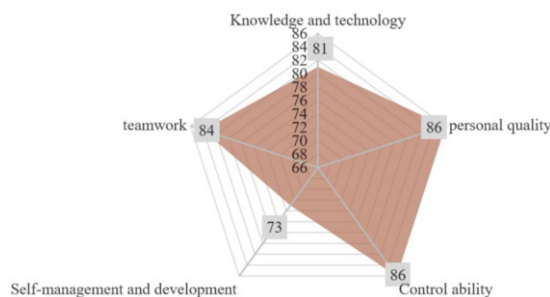

Figure 5. Competency standards for new employees in enterprises.

By constructing competency model, we define the weight of competency index; Then, through the expert group's scoring of employees rated as Class C, we set a goal for the training effect of new employees, that is, through the employee training period of 3 months to 6 months, the scores of various competency indicators and overall scores of new employees will reach or exceed the minimum score of employees' qualifications.

It is of great significance to establish a new employee training system based on competency model, including training demand analysis, training mode selection, training course design and training effect evaluation.

4. Conclusion

The training of new employees is an important part of the enterprise training system, which plays the role of guidance, standardization and infiltration. At this stage, the training of new employees should have different emphases according to the strategic development requirements and corporate culture connotation of the enterprise, and the training system should be adjusted appropriately according to the development stage of the enterprise. The construction of employee career management training system can effectively help employees find the right direction in the workplace and enter the working state invincible, and can make employees in the enterprise work together to create greater economic benefits for the enterprise. Based on the author's practical work, this paper makes a detailed study of relevant theories, and studies career management with the background of career management of bank employees as the basis of modern human capital theory, learning theory and modern career management theory, and constructs a training system for new employees in enterprises based on competency model. It is of great significance to establish a new employee training system based on competency model, including training demand analysis, training mode selection, training course design and training effect evaluation.

References

[1] Feng H. State-owned enterprise executives incentive system based on competency model. China Human Resources Development. 2015;17(18):10.
[2] Teng X. Training management from the perspective of decreasing competence. Human resources. 2015;93(8):3.
[3] Vogtenhuber S. Explaining Country variation in Employee Training: An institutional analysis of education systems and their influence on training and its returns. European Sociological Review. 2014 Nov 19;31(1):77–90.
[4] Fischer C, Lušić M, Bönig J, Hornfeck R, Franke J. Shortening Innovation Cycles by Employee Training Based on the Integration of Virtual Validation into Worker Information Systems. Procedia CIRP. 2015 Jan 1; 37:65–70, doi: https://doi.org/10.1016/j.procir.2015.08.090
[5] Zawadzki P, Żywicki K, Buń P, Górski F. Employee training in an intelligent factory using virtual reality. IEEE Access. 2020;23(99):1, doi: https://doi.org/10.1109/access.2020.3010439
[6] Vaughan D, Edgeley C, Han H-S. Forest contracting businesses in the US Southwest: Current profile and workforce training needs. Journal of Forestry. 2022;120(2):186-97.
[7] Abdullah L, Zulkifli N. Integration of fuzzy AHP and interval type-2 fuzzy DEMATEL: An application to human resource management. Expert Systems with Applications. 2015;42(9):4397-409.
[8] Teimouri H, Jenab K, Moazeni HR, Bakhtiari B. Studying effectiveness of human resource management actions and organizational agility: Resource management actions and organizational agility. Information Resources Management Journal (IRMJ). 2017;30(2):61-77.
[9] Han Y, Lian H. Dynamic assessment of human resource management on organizational effectiveness based on network platform. International Journal of Smart Home. 2016;10(4):279-288.
[10] Boutmaghzoute H, Moustaghfir K. Exploring the relationship between corporate social responsibility actions and employee retention: A human resource management perspective. Human Systems Management. 2021;40(6):789-801.
[11] Xu D, Xiao X. Influence of the Development of VR Technology on Enterprise Human Resource Management in the Era of Artificial Intelligence. IEEE Access. 2020;16(99):1-1.
[12] Kim T-H, Kumar G, Saha R, Rai MK, Buchanan WJ, Thomas R, et al. A privacy preserving distributed ledger framework for global human resource record management: The blockchain aspect. IEEE access. 2020;8: 1.