Conception of Staff Training in Manufacturing Enterprises Based on Knowledge Management

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Abstract. Many manufacturing companies are often faced with such a problem: staff training is carried out every year. "Teacher and apprentice help" pair up every year, why can't the apprentices become teachers? Many employees speak well, why are they at a loss when they encounter practical problems? Why does the level of the entire team experience a cliff-like decline when experienced veterans are furloughed, transferred or retired? Based on knowledge management theory, this paper analyzes the practical problems of staff training in manufacturing enterprises, and studies innovative methods of theoretical learning, so that manufacturing enterprises can better organize staff training, make staff training more targeted, and adapt to more working environments. Provide stronger support for the development of manufacturing enterprises.

Keywords: manufacturing enterprises · staff training · innovative methods

1 Introduction

Many executives of manufacturing enterprises are often faced with such a problem: professional staff training is carried out every year, why is it "one question and three ignorance" when it comes to the assessment? "Teacher and apprentice help" pair up every year, why can't the apprentices become teachers? Many employees speak well, why are they at a loss when they encounter practical problems? When an experienced employee is furloughed, transferred, or retired, why does the entire team level drop off a cliff? The occurrence of the above problems indicates that the manufacturing enterprises have low thinking ability or low ability to manage knowledge, and there is an urgent need to manage knowledge.

2 Knowledge Management Theory

To put it simply, knowledge management means that an organization adopts certain methods and methods to deliver the most useful knowledge to those who need it most, to help members obtain effective information and effectively apply it in their work, thereby improving work performance. Knowledge management can change the situation that the organization's previous knowledge is scattered, break the knowledge blockade, avoid

knowledge loss, promote the application and sharing of knowledge, and then enhance the organization's wisdom. At the same time, it allows organization members to access key information in the organization at any time, solve related problems in a timely manner, and help them do more with less. On the other hand, important data is stored to prevent data loss and to prevent organizational results from being affected when key personnel leave, and also allows new personnel to quickly start working after joining.

Efficient knowledge management is conducive to the rapid learning and growth of new employees. The degree of informatization in modern society is increasing day by day, and the requirements for the training speed of employees are getting higher and higher, especially for new employees who need to run to work, master the necessary basic knowledge at the fastest speed, and be able to use it in daily life. Continuous learning and progress at work. This requires rich and systematic learning knowledge resources, and an information-based knowledge platform, like a broader intelligent library, provides all the learning resources needed.

Knowledge is people's cognition of natural and social phenomena and laws on the basis of practice. At the same time, knowledge can further guide people's practice and make people's behavior more scientific and effective. Knowledge comes from information, information comes from data, information is the reprocessing of data, knowledge is the application and creation of information, and finally forms the highest level of wisdom of knowledge.

Knowledge management is a series of activities in which organizations solve problems arising from the process of knowledge allocation, and achieve effective use of knowledge through knowledge acquisition, accumulation, transfer, and transformation, so as to achieve organizational goals and improve organizational performance and competitiveness.

Y.J. Guo and others believe that in the big data environment, massive and heterogeneous teaching data puts forward new requirements for teaching knowledge management in colleges and universities. As knowledge-intensive organizations, the application of big data technology to teaching knowledge management in colleges and universities will help promote Teaching knowledge discovery and teaching efficiency improvement. Through the collection and storage of teaching big data and knowledge, mining and development, knowledge sharing, channel expansion, and result feedback, a virtuous circle of knowledge within the organization can be realized. To this end, colleges and universities need to strengthen infrastructure construction, increase explicit knowledge reserves, promote the big dataization of tacit knowledge, introduce independent learning platforms, and create a good cultural atmosphere [1].

Through the actual needs of the manufacturing team in the business, Yu Tong and others have carried out customized development of functions in knowledge management, business process, collaborative work and information security, and formed a knowledge management platform based on document management and office collaboration. The current state of knowledge management has been improved in many ways [2].

Peng Qingsong believes that the comprehensive development of enterprises should be promoted through knowledge identification, knowledge creation, knowledge acquisition, knowledge storage, knowledge sharing, knowledge application, and knowledge management reward mechanisms [3].

Wang Junmei pointed out that tacit knowledge is of great significance in creating scientific research influence. First, in the process of how to emerge or reveal tacit knowledge, researchers must not only discover tacit knowledge in their own field, but also understand the tacit knowledge of specific practitioners and other related parties. This stage is accomplished through self-reflection, reflective practice, and questioning. Second, there are different types of tacit knowledge, some implicit or interactive, which can be made explicit through the externalization process of reflection. Finally, it is beneficial for research stakeholders to understand the concept of different types of tacit knowledge in their research, but more importantly, they need to deploy resources to mine tacit knowledge [4].

3 Prominent Problems Existing in Organizing Staff Training

3.1 Not Paying Attention to the Innovation of Training Methods

With the increasing competition among manufacturing enterprises, all manufacturing enterprises have made great efforts to cultivate employees. But as far as the actual situation is concerned, emphasis on the whole rather than the individual; emphasis on action rather than theory; emphasis on operation rather than principle is still common in some manufacturing enterprises. In particular, some employees run their business outside all year round, and objective conditions also make it difficult to organize staff training into a systematic and systematic organization. At the same time, staff training is often relatively rigid when organizing training. The content of the lecture is the same every year, and the things of last year have been changed to become this year's lesson plan. What's more, just use it without changing it. Supervisors at all levels do not pay enough attention to the effect of training. They believe that as long as they pass the exam, they consider the training to be effective, and subjectively reduce the emphasis on training methods.

3.2 The Stratification of Training Objects is not Clear

At present, there is a large turnover of personnel in manufacturing enterprises, and the level of knowledge of employees is different. Therefore, personnel should be trained according to their job responsibilities. However, in reality, the idea of hierarchical organization of training is correct. However, in the actual application of manufacturing enterprises, it is difficult to accurately distinguish the level of personnel, and the content of training is only distinguished according to the level of employee qualifications. But often can not achieve better training effect. Because the basic knowledge of employees is different, each individual employee's ability to understand and understand the professional knowledge is different. There are differences between highly educated employees and ordinary educated employees in understanding the same problem, and employees with actual work experience and those without actual work experience have different approaches to solving the same problem. But manufacturing companies often ignore this point when they carry out staff training.

3.3 The Transfer of Training Experience is not Smooth

"Master leads apprentices" is a learning method commonly used by many manufacturing companies at present, but according to the actual situation, it is difficult to effectively transfer the experience of the masters to the apprentices in the process of helping and mentoring. First, the experience of older employees is often difficult to translate into written knowledge that can be recorded and expressed in an appropriate manner. There are many old employees in manufacturing companies who can actually operate it, but it is difficult for him to summarize his experience into knowledge that can be understood by the majority of employees. Second, the training experience of new employees is ignored. The common perception is that new employees have little experience, lack a comprehensive understanding of the problem, and their experience is not widely valued. When dealing with problems, on the one hand, they are too embarrassed to express themselves because of their youth, and on the other hand, their opinions and suggestions for young employees are often ignored. However, young employees will look at problems from different perspectives and may discover new knowledge points. The above situation is very likely to cause much new knowledge to be ignored.

4 Exploration of Innovative Methods for Staff Training in Manufacturing Enterprises

4.1 Basic Conception of Enterprise Applied Knowledge Management

Capitalize and motivate knowledge resources. Establish an incentive system based on knowledge products. Such as product award, design award, patent award, scheme award, etc. At a fixed point in time (such as the end of the year), employees will report by themselves, and the company will conduct centralized audits, and bonuses will come from a part of profits; at the same time, the incentives of knowledge-based employees will be strengthened, and the ability definition, training, development and assessment system will be improved.

Accelerate the construction of management system with the help of external experts. Enterprises have limited funds and strength, and cannot afford large-scale investment, but they can gradually invest in stages and rely on profits to promote the next step. Also subdivide job responsibilities. The company has limited manpower, and it is impossible to have many people engaged in related work, but the relevant responsibilities within the company should be subdivided and clarified, and one person should undertake multiple responsibilities at the same time; the company does not need to go through the process but must clarify the steps and steps of each work. Logical sequence. The institutionalization of enterprises can be carried out gradually, but not stagnant.

Improve the staff ratio structure and increase the number of business support staff. Appropriately increasing the proportion of business support personnel can enable R&D personnel to concentrate on their own work, achieve specialized division of labor, and improve R&D efficiency. Basic technology and market researchers can enhance the foresight of enterprises and improve their environmental adaptability.

Establish a complete R&D management system. Increase market research, especially research on market demand in the next 1–3 years and select projects with development

value in advance; select a certain number of personnel to engage in pre-research and select projects with the most potential; increase technology productization. Invest in efforts to promote the rapid transformation of technologies into products or solutions; increase the coordination between the front and back offices and do a good job in the pre-sale of trial production products; do a good job in platform construction and knowledge sharing and promote the modularization of research and development.

Speed up informatization construction. Pay more attention to informatization construction, and combine information security, management system construction, and process management to realize informatization of knowledge management. Take information security as the basis of knowledge management, implement a strict knowledge resource protection system; attach importance to the construction of management system, build a complete management framework system; regard process sorting as an important condition for knowledge management, and continuously optimize the work flow of various departments of the enterprise; apply information Technology, electronic management system and process, form electronic flow, and establish employee knowledge sharing community.

4.2 Manufacturing Enterprise Staff Training Methods and Measures

4.2.1 Establish a Hierarchical Organization Training Model so that Every Employee Can Understand the Knowledge

The classification organization training mode based on employees' knowledge level and acceptability is more able to promote employees' understanding of what they have learned than the current classification organization training mode based on employee identity. Although the proportion of highly educated employees is increasing, the majors learned by highly educated employees are not all for the positions they are currently engaged in. Among the non-highly educated employees, there are also many experienced employees who have higher learning ability and need to be screened. Therefore, two dimensions are considered when differentiating the training population. The first dimension is the dimension of learning ability. A distinction is made between the flexibility of thinking and the speed and understanding of new knowledge. The second dimension is the dimension of knowledge reserve, which distinguishes employees according to their work experience, knowledge reserve, and enlistment time. For the two different dimensions of the employee population, the teaching content should also be differentiated accordingly.

4.2.2 Promote the Externalization of Tacit Knowledge so that Every Employee Can Access It

The adage "A family has an old man, if there is a treasure", is also applicable in manufacturing enterprises. The "ingenuity" of each unit often plays the role of reassurance and ballast in the team. So how to better share their experience with younger employees? Because the old employees are generally older, and in the past staff training, the method of rote memorization is more common. Therefore, for a problem that can be solved by experience, it is often "knowing the truth, but not knowing the reason". Therefore, their knowledge needs to be expressed in an appropriate way, so that more experience

can be transferred to young employees. In addition, the experience gained by young employees from different perspectives should also be transferred to other employees through rationalized means. Therefore, both old experience and new knowledge must be transformed into knowledge that the majority of employees can understand and accept through appropriate methods. The first step is to express the experience in plain language or writing through extensive discussions and exchanges. This expression may be inaccurate or one-sided, but it must be understandable and operational. The second step is to bring the expressed content into the actual work for repeated verification and modification to make it more perfect and accurate. The third part is to promote and expand in a wider platform and space and collect opinions and suggestions from the majority of employees and make corrections based on feedback.

4.2.3 Build a Broad Knowledge Sharing Platform so that Every Employee Can Contribute Knowledge

Encourage the majority of employees to transfer their knowledge to more employees, build a knowledge sharing database through the internal network, and integrate the high-quality training content of the training units of each organization. In the process of teaching, each unit records the content through video recording and uploads it to the database. Learning the same content, you can learn from the training results and training methods of different training units. Each unit has its own different characteristics and will focus on the specific problems faced when teaching. In this way, each unit uploads its own teaching content to the database, which can change the problem that a previous class could not be tailored to the specific situation of each unit. After class, if each employee encounters practical problems, they can review the course through the Internet at any time and find the most suitable solution to the problem in combination with the teaching content of different units. With the establishment of team-based management authority, team leaders can upload training content and revise the content to make the shared knowledge more grounded. In each training cycle, each team must update its own training video while organizing training. This method can be used as a training method or a training supervision, so that team leaders can improve their organizational training ability and level. For employees who are away, they can also conduct staff training directly through the high-quality video resources on the platform.

5   Conclusion

Staff training has always been the weak point of manufacturing enterprise training. Staff training has lower requirements than other training contents in terms of training time and training venue. But as a basic training, staff training is also crucial to the competitiveness of enterprises.

The theoretical learning innovation method based on knowledge management can make manufacturing enterprises better organize staff training, make staff training more targeted, and adapt to more working environments, providing more powerful support for the development of manufacturing enterprises.

References

1. Y.J. Guo, Y.M. Yuan, Z.S. Yang, Research on teaching knowledge management mode in colleges and universities based on big data, Journal of Modern Information, Vol. 41, No. 10, 2021, pp. 101–108
2. T. Yu, Y.Q. Li, Y.P. Guo, SAECCE2021-MSI27, pp. 2293–2296
3. Q.S. Peng, Exploration and Analysis on Improving Organizational Memory and Thinking Ability through Knowledge Management, QiyeKeji Yu Fazhan, No. 10, 2021, pp. 172–174
4. J.M. Wang, E.A. Tacit knowledge enhances scientific research impact, Chinese Journal of Social Sciences, No. 003, 2021