

## Research Article

# Construction and Application of Vocational Training Platform for Enterprise Employees

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Massive Open Online Courses (MOOCs) are one of the most significant events in the history of education in the twenty-first century, not only tearing down university walls but also greatly increasing the sharing of high-quality educational resources and providing opportunities for everyone who wants to improve themselves. Access to tools for company personnel training and development is becoming increasingly widespread in the sharing economy. New requirements are put forward for enterprise staff training and development. MOOC (Massive Open Online Course) is a new trend of vocational training in recent years. It is important to build a reasonable training incentive mechanism to match it. This paper constructs a two-tier principal-agent mapping among enterprises, training departments, and employees and conducts simulations. It is found that adjusting the pay for performance allocation factor, risk cost factor, and the cost of effort component might boost motivation of employees and thus enhance the organizational performance generated by MOOC training. Enterprises should develop a scientific and reasonable compensation mechanism to create a good training and learning atmosphere, standardize training programs and supporting evaluation mechanisms, maximize the efficacy of MOOC training, and remove hurdles in the training process for training departments and workers through advertising, subsidies, and the creation of training platforms.

## 1. Introduction

Human resources, as the only type of dynamic resources available, play a critical role in the advancement of society, incorporated into enterprise human resource management, human resource training, and development seeks to carry out a series of actions to increase knowledge, skills, and other aspects of professional quality, among other things. As a result of their efforts, workers contribute to the shared growth of their colleagues and the organization through particular learning and training. With the advancement of information technology, the sharing economy, a new economic model that makes use of the Internet as a medium and integrates offline resources to realize the temporary or permanent sale of the right to use online items has continued to promote social progress and development in recent years. In the sharing economy, businesses can provide employees with operating technology, theoretical learning, formal analysis, career development, and other training resources,

as well as new training methods [1, 2], through a network platform. This promotes the improvement of work efficiency and the realization of the overall development of employees. Even though the majority of scholars have conducted an extensive study on the sharing economy and human resource management, with some success, there have been relatively few studies on the sharing economy and employee training and development [3]. Countermeasures, suggestions, and new inspirations for the training and development of enterprise employees in the new era are provided in this paper. It is made feasible by advances in Internet technology, quick information transmission, and resource sharing under the sharing economy paradigm [4–6].

MOOC is an abbreviation for Massive Open Online Course. It is a large-scale generated online open course and is based on Internet information technology. Recently, MOOCs have been hailed as a revolutionary new method of vocational training. MOOCs combine the advantages of online learning with those of traditional classroom learning

[7, 8]. While it makes use of the ease of online education, it also facilitates interaction between teachers and students, thereby improving the interactive experience for both parties. On the Internet, classroom education can be guided and inspired, questions answered, and puzzles solved by using information technology [9, 10]. As a result of this strategy, the education and training industry has undergone a revolution. Due to its large openness, flexible learning methods, and convenient contact, it has sparked a global wave of MOOC research that has spread around the globe. The majority of MOOC research and practice in the United States is concentrated in higher education and vocational training institutions [11–13]. When compared to the popularity of MOOC research in higher education, corporate MOOC research is still in its infancy. According to the authors, the actual implementation of MOOCs in corporate training is still in its exploratory stage.

MIT was the first to make on-campus courses available to the general public through the Internet as part of its early MOOC efforts. It went on to become the leader of the project in the open educational resource movement. Since then, major institutions around the world have begun to form open courseware alliances to make campus course recordings, related materials, and courseware available to the public without any charges. With the establishment of three MOOC platforms with academic histories, namely, Udacity, EdX, and Coursera, the first year of MOOCs was officially marked as having begun in 2012 [14, 15]. Since the inception of MOOCs at colleges and universities, the educational history that has amassed in colleges and universities over a long period has offered an abundance of curriculum resources to the MOOC platform. While businesses can have a knowledge base that is comparable to that of schools and universities, it is more difficult. As a result, some academics have claimed that there is a distinction between business MOOCs and university MOOCs when it comes to the course production processes. University MOOCs are concerned with the transfer and presentation of classroom information on the MOOC platform, whereas business MOOCs are more concerned with the production of new knowledge [16, 17]. Students can learn from one another in terms of course content by taking college MOOC courses in the same subject. However, the equipment, capital, human resources, and other resources that each enterprise possesses are quite different. This makes it difficult to achieve common content for general industry training courses. Adapting to the specific requirements of businesses, training courses must be designed following the needs of the organization by the enterprise. In this way, the research issue in corporate development MOOCs might drive training departments to provide curriculum content that is aligned with the goals of the organization [18, 19].

Enterprise MOOC refers to the process of creating knowledge from the ground. Businesses should ensure that the training content provided meets the needs of both the company and its employees. At the same time, businesses should address issues such as insufficient employee learning motivation. They cannot rely solely on the self-consciousness of employees to motivate them during the training and

learning process. This makes the development of a fair training incentive mechanism more critical [20]. It is not only the concern of enterprise managers but also the concern of enterprise MOOC researchers, as to how to inspire the training department to develop good course content and how to drive employees to actively participate in online MOOC learning. Since the decision-making of an agent is solely motivated by the maximization of its interests in the principal-agent paradigm, the principal must investigate how to motivate the agent to obtain the greatest possible entrustment benefit. The enterprise and its employees are viewed as a type of principal-agent connection in the organizational structure of the enterprise. This is distinct from the typical single-level principal-agent relationship in the organizational structure of the enterprise. For a business MOOC to be successful, the company must assign the development of MOOC courses to the training department in order to fulfill employee training. The training department has been entrusted by the firm with the agency role of developing MOOC courses, as well as the major role of training and knowledge transfer implementation. In the case of departments working together, a two-tier principal-agent relationship is established. For this reason, the purpose of this paper is, to begin with, to research the differences between enterprise MOOC and university MOOC, summarize the current research status on enterprise MOOC, analyze the need for the development of an incentive mechanism, establish a two-level principal-agent model for enterprise training departments and employees, and optimize the design of an incentive mechanism. The proposals on incentive management for enterprise staff training provide a theoretical foundation for the investigation and practical implementation of MOOCs in enterprise vocational training.

The rest of the research paper is organized as follows; Section 2 will explain the positive effect of enterprise employee training on the enterprise. Section 3 will elaborate the new changes in corporate employee training and development in the era of sharing economy. Similarly, Section 4 explains the model construction used in this research. Finally, Sections 5 and 6 explain result analysis and concluding remarks. The explanation is as follows.

## **2. The Positive Effect of Enterprise Employee Training on the Enterprise**

This section explains that the staff training lays the foundation for enterprise development, solves problems for enterprise development, and can effectively improve the level of enterprise management. This helps us demonstrate the positive effects of enterprise employee training on the enterprise. The explanation is as follows.

*2.1. Staff Training Lays the Foundation for Enterprise Development.* If a business wishes to grow and maintain a secure place in society, it is critical to invest in the training of its personnel at all stages of its existence. The long-term development of the enterprise depends on its ability of adapting to changes in the surrounding environment. In this

process, the employees of the enterprise, who constitute the most important component of the enterprise, must constantly enrich their knowledge in light of the changing environment and comprehend the various requirements and concepts of enterprise development that apply in various environments. Employee training in the workplace may help employees learn more about their jobs on their own. Increased confidence at work, improved logical and hierarchical problem-solving skills, and increased overall competence can all be attributed to the accumulation of theory.

Corporate staff training is also extremely beneficial to the success of the company. The training of employees is more productive and has a better understanding. It helps them handle problems, resulting in increased economic benefits for the organization. Following training, the overall quality and learning ability of the employees have been steadily improving over the years. They have their opinions on the political concept and business management concept in light of the changing circumstances. Their views on the ideas of employees are unambiguous. They will be able to better identify the development direction and achieve development if they work together on the development of the company. The long-term development of the company will be guided by a group of highly skilled workers who will guide the company on the right path throughout the development process. So, employee training helps both people and businesses achieve a win-win situation. They may continue to learn while working for the company and realizing their worth, and the company can grow and prosper because of their efforts. Employee training can also help to enhance the business atmosphere as well as the recognition of corporate culture and management among employees. It can be said to establish a firm basis for the long-term development of the company [21, 22].

### *2.2. Staff Training Solves Problems for Enterprise Development.*

Employee training, as has also been stated earlier, may result in a win-win situation for both employees and organizations. Personnel with greater ability are those who have received more comprehensive training. Employees can also see the sincerity as well as the growth possibilities of the company at the same time. By utilizing the platform of the enterprise, employees may work with greater confidence and recognize the value of their contributions to the company.

Enterprises are bound to face a variety of challenges as they progress through the development process, particularly in light of the current unpredictability of the worldwide environment. Businesses must compete not just against domestic but also against worldwide competitors. As a result, the trajectory of business development is more complex. In this situation, businesses must work even harder to develop their internal team of workers. The development concept and direction of the enterprise can be clearly defined by the team of employees that work for the company, and the development process of the company can be guided along the correct road by the team of employees [23, 24]. When a problem occurs, their team will be able to identify what is

required for the development of the enterprise and provide timely remedies to avoid the frontline being drawn too long and causing damage to the reputation of the company [25]. It is expected that the situation of employees performing rudimentary jobs would improve as their confidence and cohesion in the organization continue to improve [26, 27]. Workers will make every effort to contribute to the financial well-being of the enterprise so that the enterprise can reap greater benefits and project a more positive image. They are experiencing an increasing number of difficulties, particularly in the oil industry. Having their expert, the staff team will allow them to have more assurances in the development process and supply enough energy to support the industrialization of my country. Aside from that, workers have built a good work concept, are continually learning and inventing at work, and are constantly infusing fresh life into the enterprise's development as a result of the training. In a brutally competitive market climate, this permits the company to survive and prosper.

### *2.3. Staff Training Can Effectively Improve the Level of Enterprise Management.*

Employees have a critical role in the success of a company. Employee quality may represent the organization's cultural qualities in the same manner that a child might recognize his or her own effect from his or her family.

The image of employees is inextricably linked to the image of the organization. Employee cultivation by a company can result in the business philosophy of the company becoming firmly established in the hearts of the people, the creation of a positive working environment, and the exertion of a subtle impact on the behavior of employees. While enhancing the overall quality of personnel, it also helps to boost the image of the company. At the same time, only through a thorough grasp of the culture of the company can employees determine whether the organization is consistent with the development they desire and whether the organization is capable of realizing its value. Employee training and business management ideas that are appealing to employees can help firms acquire more and better-quality people while also preventing the brain drain [28, 29]. When it comes to employees, employee training serves as a platform for them to share their experiences and emotions. It can shorten the distance between them, make the relationship between them and other employees more intimate, and also strengthen their emotional dependence on the company. Employees regard the enterprise as their own family. It improves the work efficiency of the employees, as well as their sense of responsibility for the development of the enterprise. Organizational management that is founded on the profound feelings of the employees for the organization can be carried out more successfully while also achieving outcomes in the same time frame. Employees have improved their logical thinking of classifying and operating hierarchically as a result of their training. They have also developed the correct values of employees subtly, resulting in favorable conditions for company management [30, 31].

### 3. New Changes in Corporate Employee Training and Development in the Era of Sharing Economy

This section explains the enterprise-based training that has been transformed into the joint development training of enterprises and employees, transforming single training into diversified and intensive training, the enterprise-based training that has been transformed into the joint development training of enterprises and employees, and the transforming popular training into differentiated long-term training. This will help us demonstrate new changes in corporate employee training and development in the era of sharing economy. The explanation is as follows.

*3.1. The Enterprise-Based Training Has Been Transformed into the Joint Development Training.* In today's world, businesses view human resources as the most important factor in their advancement and development. They place greater emphasis on "people-oriented management" in their operations. At the same time, as the Internet economy continues to grow at a rapid pace, businesses are utilizing network information platforms to determine the career development requirements of their staff and to understand their customers. For the development of an enterprise to keep pace with its employees' personal development, the career development of employees must be directed by the employees themselves. Big data is used by the organization to collect, organize, and analyze the training needs of its employees to provide support for training development and ensure proper training. Employee training and development has changed from being enterprise-centered to be employee-centered in the age of the sharing economy, as seen by the realization. As a consequence, an employee-centered training requirements analysis was created. While doing so, employees assist firms with technical, knowledge-based, and managerial support. This results in the formation of a community of shared future for development.

*3.2. Transforming Single Training into Diversified and Intensive Training.* Because of the sharing economy, the development of employee training has enabled the transfer from a single training model based on firms employing a few trainers or training organizations to a diversified and intensive training model based on the O2O (online-to-offline) sharing economy. Employees can choose online training teachers and learning content according to their requirements in terms of technology, knowledge, and position whenever companies provide them with an online self-learning platform. As a result, employee training development becomes more accurate and the effect becomes more significant. To ensure that the learning situations of employees are frequently assessed, enterprises can use internal training resources to develop complementary advantages among employees within the organization, as well as growing talents to make up for any inadequacies that may exist. Employees with a high level of ability or experience can

help those with a lower level of knowledge or talents. This not only improves the overall quality of the workforce, but also greatly lowers the cost of hiring external training instructors. Consequently, employee training and development in the sharing economy has seen a shift away from knowledge and skills training to knowledge and skills, career development, professional quality, emotional intelligence, psychological quality, and other aspects of diversified training as a result of the transformation. Diversified and intensive training not only improves the effectiveness of training development and reduces training costs but also increases employee satisfaction with their training and development.

*3.3. The Enterprise-Based Training Has Been Transformed for the Company.* By cooperating with online recruitment platforms and combining their own development needs, enterprises can hire management, technology, sales, service, and other training teachers and establish a unique knowledge system and training teachers that meet the characteristics of their enterprises. This forms a strong talent think tank. The development of corporate staff training has resulted in the transformational achievement of building a talent pool of trainers, which is now being implemented. Employee training and development, on the other hand, is more directly linked to the strategic development goals of the company and has greater flexibility to adapt to a dynamic environment. Businesses may get internal and external information more conveniently through the network platform. It significantly reduces the amount of time that it takes for businesses to alter their strategies and efficiently resolves the problem of information lag. It is a common problem in China. Employee training and development are being actively modified at the same time as the company's strategy is being actively altered. This can effectively prevent training and development from becoming out of sync with the goals of the company and increase the ability of withstanding risk while the company actively adjusts its strategy.

*3.4. Transforming Popular Training into Differentiated Long-Term Training.* Resources are utilized at a higher rate, and the frequency of trade increases dramatically in the sharing economy. An increasing number of people are opting for a more liberated way of living and working. The ways and types of careers available are likewise becoming more diverse as a result. By combining social and internal resources, businesses may provide workers with a myriad of training options. Network technology is used to integrate and categorize resources to fulfill the training demands of employees and to facilitate the development of differentiated training for employees. Employee training and development are ongoing processes in which the company collects information about the training and learning of employees through the network background, evaluates learning, explores the potential, encourages employees, and quickly identifies problems of the employees in the process of employee training and development. After a round of training development is completed, experience and lessons

are supplied for the next round of training development through the successful integration of information such as difficulties, successes, and employee satisfaction in training development.

#### 4. Model Construction

The purpose of organizations implementing MOOC training is to increase organizational performance. Employee performance is the cornerstone of organizational success. MOOC training can help organizations achieve this goal. As depicted in Figure 1, enterprises, training departments, and employees are all tied together through employee performance and organizational performance to build a two-tier principal-agent connection that is based on the principal-agent model. Improved organizational performance is one of the general customer objectives. The first-level principal-agent relationship is formed between the client enterprise and the training department, with the client enterprise's primary objective being to motivate the training department to develop courses that are tailored to the needs of employees. The goals of employees are to increase their output by participating in training. Informing the second-tier principal-agent relationship, the goal of the training department is to motivate employees to actively participate in training to improve employee performance and then obtain the organizational performance share provided by the first-tier client company; the employee's purpose is to boost their production by attending training.

As a result, to make mathematical modeling more convenient, it is required to abstract and mathematically simplify the two-tier principal-agent interaction between firms, training departments, and employees. Therefore, the following fundamental assumptions are made.

Assuming that the organizational performance output  $\pi$  depends on the training department effort  $a_1$  and the employee effort  $a_2$ , the influence coefficient is set to 1 for the convenience of model operation. The influence of other influencing factors on the performance output is regarded as an exogenous interference factor  $\theta$ . The more diligently the training department works, the better the curriculum fulfilling of the demands of the employees becomes. The more diligently the employees work, the better the training effect is, and, as a result, the greater the output of organizational performance is.

$$\pi = a_1 + a_2 + \theta. \quad (1)$$

Employee income is

$$S_1 = \alpha_1 + k_1 k_2 \pi, \quad (2)$$

where  $\alpha_1$  is fixed salary,  $k_1 k_2 \pi$  is performance salary,  $k_1$  is the performance salary distribution coefficient, which means that the enterprise allocates the organizational performance to the training department and employees according to the proportion of  $k_1$ , as the performance salary, and  $k_2$  is the employee performance. Salary coefficient indicates the performance salary sharing coefficient that employees can get. The training department's income is as follows:

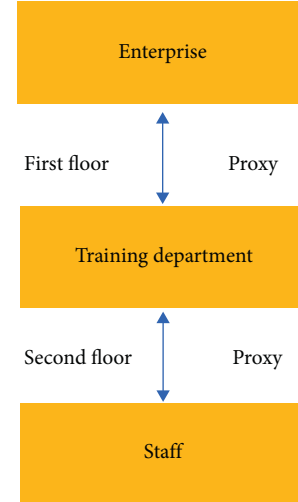


FIGURE 1: The relationship between enterprises, training departments, and employees.

$$S_2 = \alpha_2 + k_1 (1 - k_2) \pi, \quad (3)$$

where  $\alpha_2$  is fixed salary and  $k_1 (1 - k_2) \pi$  is the performance salary.

The three-party risk aversion assumption, which was utilized in the two-tier principal-agent model of the PPP project, is applied to the two-tier principal-agent interaction between the firm, the training department, and the employee in the PPP project. The enterprise serves as the principal, and the training department, the enterprise's principal, and agent are served by this topic, which has been recognized as a unique dual-role topic. The enterprise and training departments are completely risk-averse. Employees act as agents for the company.

Suppose that the risk aversion degree is  $p$  and the utility obeys

$$U = -e^{\rho S_i}. \quad (4)$$

Workers are risk-averse, and the cost is constituted of two components: effort cost and risk-averse cost. In the principal-agent model, it is commonly assumed that the effort cost grows in proportion to the increase in the effort of agent and that the marginal effort cost increases in proportion to the increase in the effort of agent. Therefore, the employee effort cost is  $na_2^2/2$ , where  $n$  is the effort cost coefficient and the risk avoidance cost is  $\rho\sigma^2 k_1^2 k_2^2/2$ . The staff cost is

$$C_1 = \frac{na_1^2}{2} + \frac{\rho\sigma^2 k_1^2 k_2^2}{2}. \quad (5)$$

The cost of the training department is

$$C_2 = \frac{na_2^2}{2}. \quad (6)$$

Further, to establish a model, the net income of the enterprise is

$$S_3 = \pi - S_1 - S_2 = (1 - k_1) \pi - \alpha_1 - \alpha_2. \quad (7)$$

The employee's net income is

$$U_1 = S_1 - C_1. \quad (8)$$

The expected benefit of the employee is

$$EU_1 = \alpha_1 + k_1 k_2 (a_1 + a_2) - \frac{na_1^2}{2} - \frac{\rho\sigma^2 k_1^2 k_2^2}{2}. \quad (9)$$

The net income of the training division is

$$U_2 = S_2 - C_2. \quad (10)$$

The expected benefit of the training department is

$$EU_2 = \alpha_2 + k_1 (1 - k_2) (a_1 + a_2) - \frac{na_1^2}{2}. \quad (11)$$

The expected return of the company is

$$EU_3 = (1 - k_2) (a_1 + a_2) - \alpha_1 - \alpha_2. \quad (12)$$

Therefore, in the first-level principal-agent relationship, the optimal parameter model of the principal enterprise is

$$\max EU_3 = (1 - k_2) (a_1 + a_2) - \alpha_1 - \alpha_2,$$

$$\text{s.t.} \begin{cases} EU_2 \geq \bar{W}_2, \\ a_2 \in \arg \max EU_2, \\ \max EU_2 = \alpha_2 + k_1 (1 - k_2) (a_1 + a_2) - \frac{na_1^2}{2}. \end{cases} \quad (13)$$

## 5. Results and Analysis

Initial assumptions are made about employee effort, such as whether the performance pay distribution coefficient  $k_1$  and the employee performance pay distribution coefficient  $k_2$  are positively connected.

As depicted in Figures 2 and 3, respectively, it is shown that the performance salary distribution coefficient and the employee performance salary coefficient are increasing functions of the effort of the employees, indicating that their efforts are related to the salary incentive mechanism formulated by the enterprise and that the link between this mechanism and the training effect can encourage employees to learn new skills.

In Figure 4, it can be seen that the employee risk cost factor and the effort cost coefficient are both decreasing functions of the effort of the employees, indicating that their efforts are also related to the MOOC learning environment and resource support that exists outside of the company's compensation mechanism. Employee risk can be reduced in a positive MOOC learning environment. Employees' learning challenges can be lessened by avoiding psychological traps and giving enough resource support, and their effort level can be increased as a result of these actions.

Further, the satisfaction of the training content and training form of the training platform for one hundred enterprise employees was investigated, as shown in Figures 5

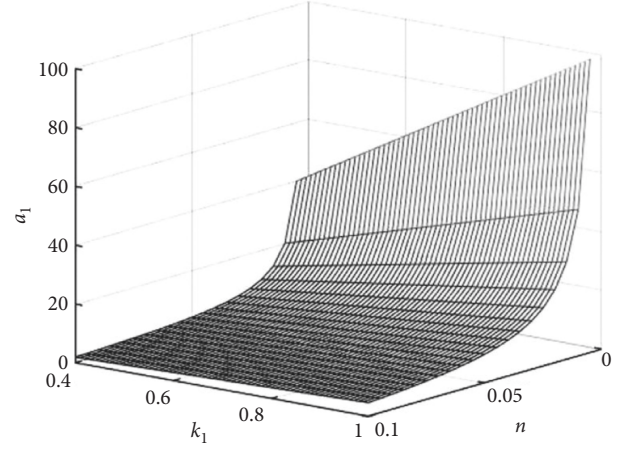


FIGURE 2: The changing trend of employee effort level with performance salary distribution coefficient and effort cost coefficient.

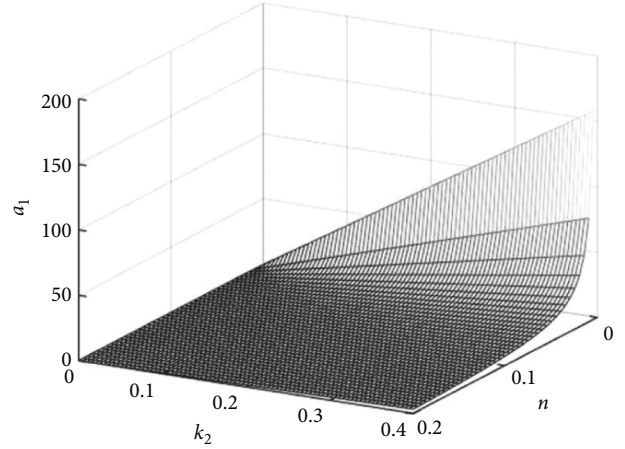


FIGURE 3: The changing trend of employee effort level with employee performance distribution coefficient and effort cost coefficient.

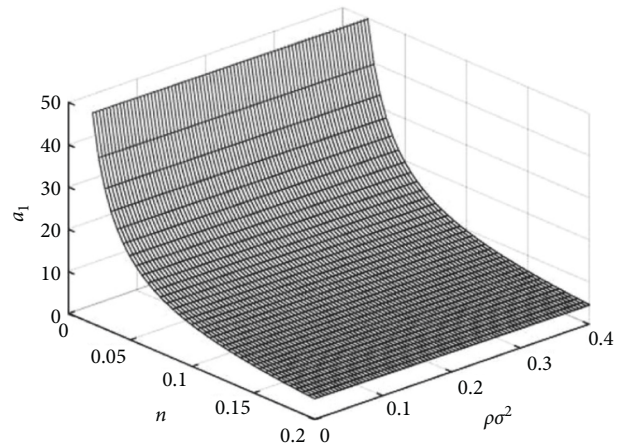


FIGURE 4: The changing trend of employee effort level with risk cost factor and effort cost coefficient.



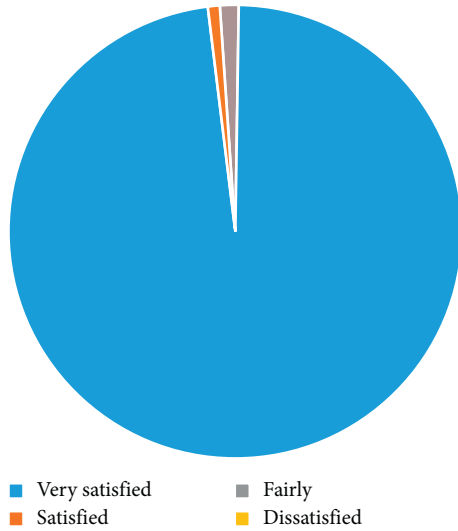


FIGURE 5: Employee satisfaction in the form of training.

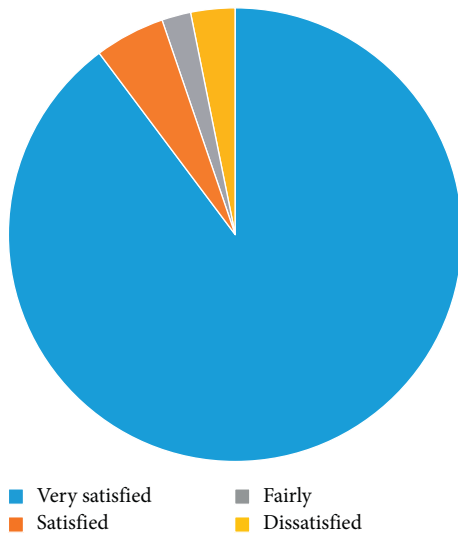


FIGURE 6: Employee satisfaction with training content.

and 6. From Figures 5 and 6, it can be seen that more than 90% of the people are very satisfied with the training platform in this article and only three people are dissatisfied with the training content, which fully shows that the vocational training platform in this article is well constructed.

## 6. Conclusion

MOOCs are currently a viable option for vocational education and training in China. MOOCs with low entry barriers, flexible learning times and locations, and a variety of learning methods can help China’s vocational education and training expand. In MOOC training, the goal is for employees who participate to maximize organizational benefits. The goal of the training department is to improve the training effect while also increasing the share of organizational performance. Employees who do not engage in MOOC training, on the other hand, want to enhance their

performance. There are divergent objectives and conflicts of interest among the three parties involved in this situation. This paper develops a two-layer principal-agent model to organically unify the three-party goals and investigates how the enterprise motivates the training department and employees, for the behavioral decisions of the training department and employees based on their own goals to also meet the organizational goal of maximizing organizational performance. The platform is for enterprise-wide vocational training for employees. As the economy evolves, businesses are progressively recognizing the need of employee training. Depending on the existing development conditions and future growth requirements of a given organization, improving staff ability and quality, as well as enhancing employee training and development, may serve as a reasonable assurance for the firm’s development. When it comes to corporate training, we must pay close attention to the training methods that are used and to the training needs of the personnel. Employees can only feel the sincerity of the enterprise if they are trained properly. Only by properly training employees can the enterprise retain high-quality talents and support the development of the enterprise, among other things. This is a wonderful step forward.

## Data Availability

The data used to support the findings of this study are available from the corresponding author upon request.

## Conflicts of Interest

The author declares that he has no conflicts of interest.

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