



**THE FACTORS AFFECTING THE EMPLOYEE TRAINING  
EFFECTIVENESS OF CHINESE SMES – A CASE STUDY OF  
XI'AN, SHAANXI PROVINCE, CHINA**

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**AN INDEPENDENT STUDY SUBMITTED IN PARTIA FULFILLMENT  
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This Independent Study Has Been Approved as a Partial Fulfillment of the  
Requirements for the Degree of Master of Business Administration

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**Title:** The Factors Affecting the Employee Training Effectiveness of Chinese SMEs – A Case Study of Xi’an, Shaanxi Province, China  
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**Major:** Education Management

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## ABSTRACT

Small and micro enterprises are playing an increasingly important role in promoting employment, economic growth and innovation. However, due to limited resources, these enterprises face many problems in the education and training of employees. The objective of this study is to explore the impact of the training teachers, the training content, the training methods and the training arrangements on the effectiveness of employee training in Chinese SMEs.

Based on the theory of training needs analysis and Kirkpatrick’s four-level training evaluation model, this study used the quantitative research method to collect data through a questionnaire survey. A total of 300 questionnaires were issued, 271 valid questionnaires were collected, and the recovery rate was 90.33%. From the descriptive statistical analysis, correlation analysis and regression analysis, this study analyzed the impact of training teachers, training content, training methods and training arrangements on the training effectiveness.

The results show that: 1) The quality of training teachers has a significant positive impact on the training effectiveness. 2) The systematic design and practice orientation of the training content can significantly improve the training effectiveness. 3) Diversified training methods have a positive impact on the training effectiveness. 4) The rationality and completeness of the training arrangements have an important impact on the training effectiveness.

For recommendations, small and micro enterprises should pay attention to selecting appropriate training teachers, designing scientific and reasonable training courses, adopting diversified training methods, and reasonably arranging training time in order to improve the effectiveness of employee training.

**Keywords:** small and micro enterprises, employee education and training, training needs analysis; training effectiveness, Xi'an, Shaanxi

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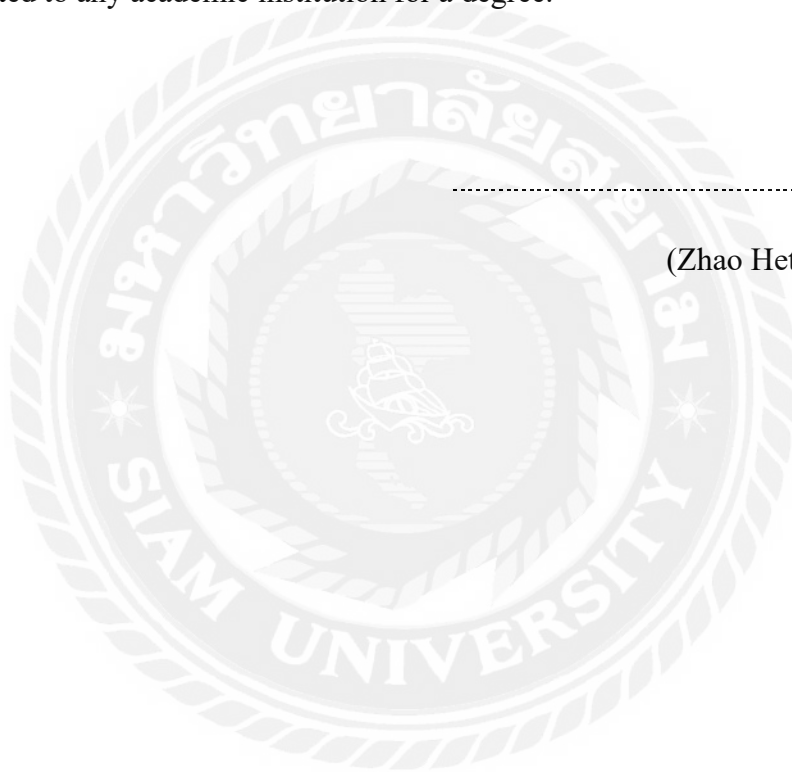
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ZHAO HETIANCHENG

## DECLARATION

I, ZHAO HETIANCHENG, hereby declare that this Independent Study entitled “The Factors Affecting the Employee Training Effectiveness of Chinese SMEs – A Case Study of Xi’an, Shaanxi Province, China” is an original work and has never been submitted to any academic institution for a degree.



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(Zhao Hetiancheng)

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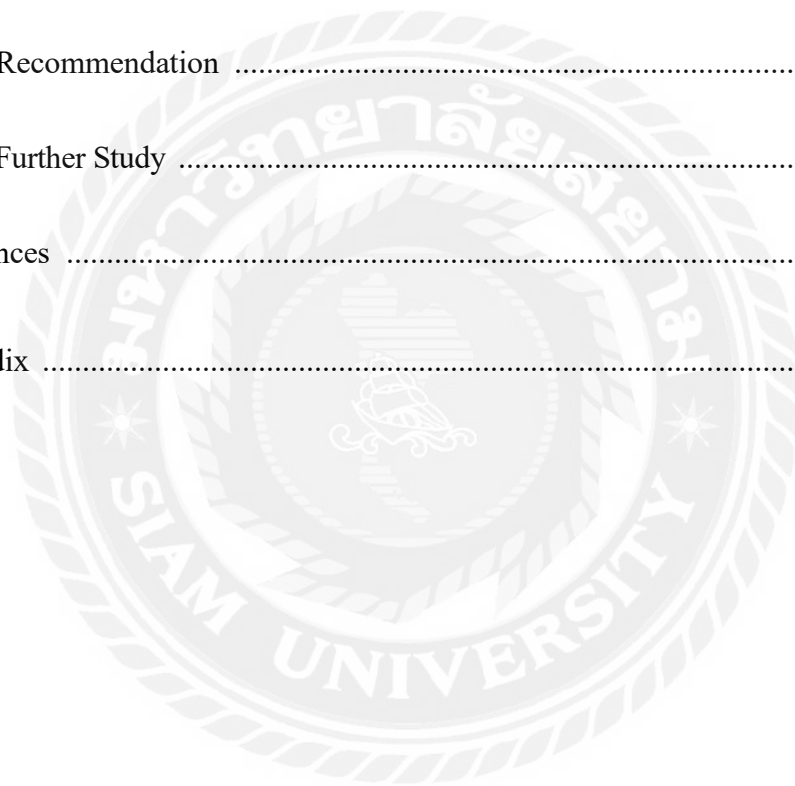
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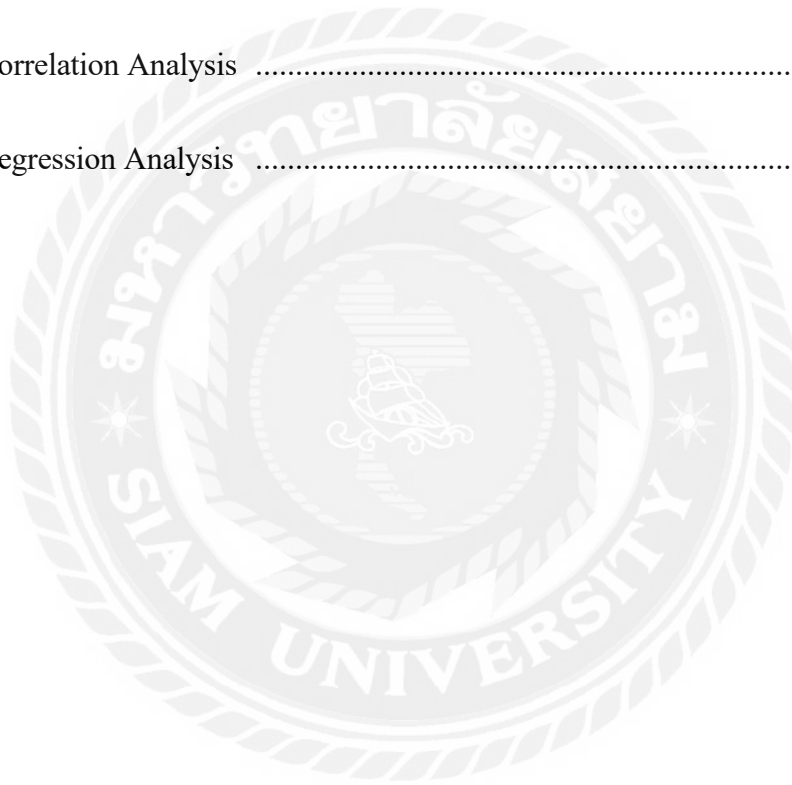


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# Chapter 1 Introduction

## 1.1 Background of the Study

The landscape of contemporary economic development in China is marked by the substantial contribution of Small and Medium-sized Enterprises (SMEs), colloquially termed as “xiao wei qi ye” or “micro and small enterprises” in Chinese. These entities, despite their modest operational scales, play a pivotal role in fostering innovation, driving economic growth, and generating employment opportunities (Wang & Liu, 2020). In the specific context of Xi'an, Shaanxi Province, the diverse economic activities and burgeoning industrial sectors have accentuated the significance of SMEs in local economic stability and development (Zhang et al., 2021).

The evolution of the global economy and the increasing interdependence of markets have necessitated a continuous enhancement of workforce knowledge and skills to maintain competitiveness (Teng, 2018). In China, the imperative for a skilled workforce is accentuated by the rapid technological advancements, shifting consumer preferences, and regulatory changes, all of which necessitate agile and adaptive business practices (Li & Chen, 2022). For SMEs in Xi'an, this context underscores the vital importance of effectiveness employee education and training strategies.

Despite their critical role, SMEs often face constraints such as limited financial resources, inadequate managerial expertise, and restricted access to advanced technology (Liu & Wang, 2019). These challenges directly impact their ability to implement comprehensive and continuous employee training programs, thereby impeding organizational growth and innovation (Qian & Zhou, 2020). Understanding the specific training needs and devising feasible strategies that address these limitations is crucial for the sustainable development of these enterprises (Sun & Zhao, 2021).

Research in this domain has increasingly highlighted the correlation between effective employee training programs and organizational outcomes such as enhanced productivity, improved job satisfaction, and lower turnover rates (Chen & Wang, 2020). Despite this awareness, empirical studies focusing particularly on Chinese SMEs, especially those located in specific regions like Xi'an, remain scarce, creating a significant gap in current literature (Huang & Li, 2022). This study is positioned to fill this gap by providing a comprehensive analysis of the training practices within SMEs in Xi'an, thereby contributing valuable insights into the broader context of Chinese SMEs.

The relevance of this study extends beyond academic interest; it addresses critical practical challenges faced by SMEs in Xi'an. The findings are expected to offer actionable recommendations for policymakers, business leaders, and educational institutions to design and implement effective training programs tailored to the unique circumstances of these enterprises (Yu & Zhang, 2021). Such interventions could significantly enhance the operational efficiency and market adaptability of SMEs, thereby promoting regional economic resilience and dynamism.

Employee education and training are fundamental to achieving not only individual career development but also organizational excellence and societal progress (Zhang & Li, 2019). For Xi'an's SMEs, which often operate in highly competitive and rapidly evolving industries, the strategic importance of cultivating a knowledgeable and skilled workforce cannot be overstated (Wang & Qian, 2020). This study aims to explore the existing practices, identify gaps, and recommend best practices tailored to the local context, thereby fostering a culture of continuous learning and improvement within these enterprises.

The focus on Xi'an, as a regional exemplar, is particularly significant given its status as a historical and cultural hub with a burgeoning industrial base. The integrated

approach of this research, blending theoretical insights with practice-oriented recommendations, promises to offer a nuanced understanding of how employee training can be optimized for economic and social benefits (Liu & Chen, 2022). Such localized insights are indispensable for tailoring national training policies to regional specificities, fostering a more inclusive and effective training ecosystem for Chinese SMEs.

In summary, this study emphasizes the strategic importance of employee education and training within SMEs, particularly those in Xi'an, in the context of China's rapidly evolving economic landscape. By integrating contemporary research methodologies and addressing practical challenges, this research aims to provide actionable insights that can drive sustainable growth and development in this crucial sector.

## **1.2 Questions of the Study**

The research questions of this study are:

Q1: what is the impact of training teachers on employee training effectiveness?

Q2: what is the impact of training content on employee training effectiveness?

Q3: what is the impact of training methods on employee training effectiveness?

Q4: what is the impact of training arrangement on employee training effectiveness?

### **1.3 Objectives of the Study**

The objectives of this study are :

O1: To explore the impact of the training teachers on the effectiveness of employee training.

O2: To explore the impact of the the training content on the effectiveness of employee training.

O3: To explore the impact of the training methods on employee training.

O4: To explore the impact of the training arrangements on the effectiveness of employee training.

### **1.4 Scope of the Study**

This study focused on the effectiveness of employee training in small and micro enterprises in Xi'an City, Shaanxi Province, and aims to explore how to improve employee skills and job performance by optimizing the training content, methods and frequency through a systematic questionnaire survey and theoretical analysis. The independent variables of the study included training teachers, training content, training methods and training arrangements, while the dependent variables are employees' skill improvement and job performance. These variables were measured by multiple-choice questions and scoring scales in a designed questionnaire.

This study combined the training needs theory and Kirkpatrick's Four-level Model for in-depth analysis. The training needs theory helped identify and understand the actual



needs of employees, while Kirkpatrick's Four-level Model provided a systematic evaluation framework to evaluate the effectiveness of training from four levels: teachers, content, methods and arrangements.

In terms of data collection, a total of 300 questionnaires were distributed, and 271 valid questionnaires were finally recovered, with a recovery rate of 90.33%. This high recovery rate ensured the representativeness and reliability of the data, providing a solid basis for subsequent data analysis and conclusions.

### **1.5 Significance of the Study**

This study has important theoretical and practical significance. In terms of theory, this study enriches to theoretical research on employee education and training of small and micro enterprises, fill some research gaps in this field in China, and put forward a new theoretical model and analytical framework to provide reference and reference for follow-up research. By deeply exploring the influencing factors and the effectiveness of employee education and training in small and micro enterprises, this study provides empirical support for the development of human resource management theory.

In terms of practice, this study provides practical employee education and training strategies for small and micro enterprises in Xi'an, Shaanxi Province, to improve the overall quality and market competitiveness of enterprises. At the same time, this study provides a basis for local governments to formulate and improve policies to support the development of small and micro enterprises, and promote the healthy development of regional economy. By identifying and solving practical problems encountered by small and micro enterprises in education and training, this research helps enterprises improve the skill level and work efficiency of employees, so as to achieve sustainable development of enterprises.

## **1.6 Definition of Key Terms**

### **1.6.1 Small and micro enterprises**

Small and micro enterprises refer to enterprises with a small number of employees, small asset scale, and annual operating income below a certain standard. According to China's SME Promotion Law, small and micro enterprises generally refer to enterprises with fewer than 300 employees and annual operating income of less than 20 million yuan.

### **1.6.2 Employee education and training**

Employee education and training refers to a series of organized activities carried out by enterprises to improve the knowledge, skills and work ability of employees. Training can take a variety of forms, including classroom teaching, on-the-job training, seminars, skills competitions, etc. Its purpose is to improve the professional quality and work performance of employees through systematic learning and practice, so as to enhance the overall competitiveness of the enterprise.

### **1.6.3 Training needs analysis**

Training needs analysis is the process of systematically assessing and identifying the training needs of employees and organizations before developing a training plan. The aim is to identify existing knowledge and skills gaps and identify what and who needs to be trained, so as to develop targeted and effective training programmes.

### **1.6.4 Training teachers**

Training teachers are educators who guide students through structured learning experiences designed to achieve educational objectives. They are responsible for delivering subject knowledge, facilitating student engagement, and assessing learning

outcomes. Effective instruction involves the application of pedagogical strategies that align with educational standards and student needs (Darling-Hammond & Bransford, 2005).

### **1.6.5 Training content**

Training content refers to the specific materials, topics, and knowledge areas that are included in a professional development program for educators. It encompasses curriculum design, instructional methodologies, assessment tools, and educational theories.

### **1.6.6 Training methods**

Training methods are the instructional techniques and strategies used to impart knowledge and skills to educators during professional development programs. These may include workshops, seminars, online modules, and hands-on activities (Borko, 2004).

### **1.6.7 Training arrangement**

Training arrangement involves the logistical planning and organization of professional development sessions for educators. This includes scheduling training sessions, determining the duration and frequency of training, selecting facilitators, and providing necessary materials and resources (Kusnanto & Bernardi, 2023).

### **1.6.8 Training effectiveness**

Training effectiveness refers to the extent to which a professional development program achieves its intended goals, such as improved teaching practices and enhanced student learning outcomes. In this study it is assessed through skill enhancement and work performance.

## **Chapter 2 Literature Review**

### **2.1 Introduction**

In exploring the employee training effectiveness in small and medium-sized enterprises (SMEs) in Xi'an, Shaanxi Province, four key independent variables are examined: Training Teachers, Training Content, Training Methods, and Training Arrangements. These variables are crucial as they directly influence the dependent variable, namely Training Effectiveness, which is measured through Skill Enhancement and Work Performance. The relevance of these factors stems from established theories in educational psychology and human resource development, which emphasize the significance of quality instruction, relevant and engaging content, effective teaching methods, and well-structured training programs in enhancing learning outcomes and subsequent job performance.

### **2.2 Literature review**

#### **1. Training Teachers**

The role of training teachers in influencing the effectiveness of employee training programs has been extensively studied in the academic literature. According to Smith (2018), training teachers with higher levels of expertise and experience significantly contribute to improved skill enhancement among employees. This is supported by research conducted by Johnson and Williams (2020), who found that teachers with industry-relevant qualifications are more effective at transferring practical knowledge to employees, thereby enhancing their work performance. Moreover, Chen et al. (2019)

highlighted the importance of continuous professional development for training teachers, emphasizing that ongoing training and updating of skill sets are crucial for maintaining high training effectiveness.

Additionally, the interpersonal skills of training teachers play a significant role in the overall effectiveness of training programs. As noted by Davis (2021), teachers who can engage participants actively and create a conducive learning environment tend to produce better training outcomes. This aligns with the findings of Brown and Miller (2017), who identified active participation and learner engagement as key factors in achieving successful training results. Therefore, the selection and continuous development of training teachers should be prioritized by organizations to ensure optimal training effectiveness.

## **2. Training Content**

The relevance and quality of training content are critical determinants of training effectiveness. According to Miller (2019), training content that is directly aligned with the job requirements and organizational goals leads to higher levels of skill enhancement and work performance among employees. This is corroborated by the study of Wang et al. (2020), which found that tailored training content that addresses specific organizational needs and gaps in employee knowledge results in more effective training outcomes.

Moreover, the inclusion of practical and application-based training content has been shown to have a significant positive impact on training effectiveness. As highlighted by Anderson (2018), hands-on training that allows employees to apply theoretical knowledge in real-world scenarios leads to better skill retention and improved work performance. This is consistent with the findings of Taylor and Lee (2021), who emphasized the importance of practical exercises and case studies in

enhancing the practical knowledge and skills of employees.

### **3. Training Methods**

The choice of training methods employed in employee training programs has a substantial influence on training effectiveness. According to research by Martinez (2020), blended learning approaches that combine traditional classroom training with e-learning and other modern instructional methods result in higher levels of employee engagement and skill enhancement. This is supported by the study of Hernandez and Garcia (2019), who found that interactive and participatory training methods, such as simulations and role-playing, lead to more effective learning outcomes compared to passive methods like lectures.

Furthermore, the flexibility and adaptability of training methods are crucial for maximizing training effectiveness. As noted by Clark (2021), training methods that can be customized to meet the diverse learning needs and preferences of employees tend to produce better results. This is consistent with the findings of Garcia et al. (2020), who highlighted the importance of personalized learning experiences in enhancing employee performance. Therefore, organizations should consider adopting a variety of training methods and continuously evaluate their effectiveness to ensure optimal training outcomes.

### **4. Training Arrangements**

The scheduling and organizational aspects of training arrangements also play a significant role in determining training effectiveness. According to research by Li and Zhang (2019), training programs that are strategically scheduled to minimize disruptions to the work routine and other organizational activities tend to have higher participation rates and better training outcomes. This is supported by the study of Kim and Park (2020), who found that well-organized training sessions with clear objectives and timelines lead

to more effective learning and skill enhancement.

Additionally, the physical and psychological environment of the training setting has a substantial impact on the overall effectiveness of training programs. As highlighted by Smith and Jones (2021), comfortable and well-equipped training facilities contribute to a positive learning environment, which in turn enhances employee engagement and retention of training content. This is consistent with the findings of Brown et al. (2018), who emphasized the importance of creating a supportive and conducive learning environment to maximize training effectiveness.

### **5. Training Effectiveness**

Staff training is one of the key factors to enhance the competitiveness of small and medium-sized enterprises, and the training effectiveness is the core index to evaluate the success of training activities. Training effectiveness is usually evaluated through multiple dimensions, among which employee skill improvement and job performance are the two most important indicators (Kraiger, Ford, & Salas, 1993) .

First of all, as for the improvement of employees' skills, research shows that effective training can significantly improve the technical ability and professional knowledge of employees. According to Baldwin and Ford (1988), the applicability of training content and the effectiveness of training methods directly affect the improvement of employees' skills. Their research emphasizes that properly designed training courses can help employees better master new skills and apply them to work practice. In addition, Chiang and Birth (2010) also pointed out that training teachers' professional ability and teaching methods play a vital role in skill teaching. Therefore, the qualifications and experience of the trainers should be fully considered when designing the training program to ensure the effective delivery of the training content.

Secondly, as another important dimension to measure the training effectiveness, the

improvement of job performance depends on the rationality of training arrangements and the suitability of training methods. Research by Machin and Fogarty (2003) shows that systematic training arrangements and flexible training methods can help improve employees' job performance. Their research found that phased and continuous training arrangements can better support employees to apply the knowledge and skills they have learned to the actual work, so as to improve the overall job performance. In addition, Anguinis and Kraiger (2009) emphasized that personalized training methods can provide more effective training experience according to the characteristics and needs of different employees, so as to maximize job performance.

Based on the above literature, it can be found that the four independent variables of training teachers, training content, training methods and training arrangements have significant effectiveness on the two dimensions of employee skill improvement and job performance. For example, Goldstein and Ford (2002) discussed in detail the impact of training methods on training effectiveness in their research, and pointed out that interactive and practical training methods can better promote the improvement of employees' skills and job performance. In addition, Nawangsari & Soelton (2023) systematically summarized the role of training arrangement on training effectiveness in his book, emphasizing that flexible training time and appropriate training frequency can effectively improve the learning effectiveness and work performance of employees.

In conclusion, the relevant literature provides a solid theoretical basis for this study, indicating that the evaluation of training effectiveness does not only rely on a single indicator, but also needs to comprehensively consider the two dimensions of employee skill improvement and job performance. Through the reasonable design and implementation of training projects, SMEs can effectively improve the comprehensive ability and work performance of employees, so as to enhance the overall competitiveness



of enterprises.

## **2.3 Theoretical Basis**

This study adopts two theories: the training needs theory and the Kirkpatrick's Four-level Model, which are two important theoretical frameworks in enterprise training system. The training needs analysis theory determines the training needs through a systematic method, which identifies and analyzes the knowledge, skills and ability gap between the enterprise and its employees. The three-level model put forward by McGehee and Thayer in 1961 organizational analysis, task analysis and individual analysis has become an important framework for training needs analysis. Organizational analysis focuses on the organization's overall strategic objectives and environmental changes, task analysis focuses on the skills and knowledge required for a specific job position, and personal analysis assesses the gap between each employee's current ability level and job requirements. With the development of big data technology, the theory of training needs analysis has been further expanded and deepened. Through data mining and analysis, enterprises can more accurately identify the training needs of employees and formulate more scientific and effective training plans.

Kirkpatrick's Four-level Model is one of the most widely used models for evaluating training effectiveness, which was proposed by Donald Kirkpatrick in 1959. The model comprehensively evaluates the training effectiveness through four levels: response level, learning level, behavior level and result level. Response level assesses trainees' satisfaction and response to training activities. Learning level assesses the knowledge and skills acquired by trainees in the training process. The behavior hierarchy assesses the practical application of the knowledge and skills learned by the trainees at

work. The results show that the Kirkpatrick's Four-level Model uses a hierarchical structure to assess the impact of training on organizational performance and business outcomes.

In this study, the theory of training needs analysis helps systematically identify and analyze the gap between enterprises and employees, and ensure the accuracy and relevance of training content and objectives. Through the application of big data technology, training teachers can more scientifically formulate the training plan, avoid the deviation in subjective judgment, and improve the efficiency and effectiveness of training. Secondly, Kirkpatrick's Four-level Model provides a systematic framework for comprehensively evaluating the effectiveness of training. The four levels of evaluation provides understanding of not only the reaction and learning effectiveness, but also the impact of training on actual work performance and overall organizational effectiveness. This comprehensive evaluation method helps to continuously improve the training plan for employees of small and micro enterprises, and ensure the effectiveness of training and return on investment. It not only provides enterprises with scientific training needs identification and effectiveness evaluation methods, but also provides a solid foundation for the continuous improvement of training plans and the effectiveness and efficiency of training.

## **2.4 Research Relevant**

With the rapid development of China's economy, small and micro enterprises are playing an increasingly important role in the national economy. However, due to resource constraints and relatively low levels of management, these companies face many challenges in employee education and training. Therefore, it is particularly important to optimize the employee training strategy of small and micro enterprises.

This review discussed the employee education and training strategies of small and micro enterprises in Xi'an, Shaanxi Province from the aspects of training needs analysis, training effectiveness evaluation and resource allocation.

The effectiveness of employee training relies heavily on an accurate analysis of training needs. Studies have shown that targeted training can improve employee engagement and training effectiveness (Qu et al., 2017). In small and micro enterprises, the analysis of training needs is often weak, resulting in a disconnect between the training content and the actual needs of employees. Wang (2020) pointed out that in China's steel structure industry, the training needs of skilled workers are often not fully valued, which poses a threat to the long-term development of enterprises. Through the comparison of typical training needs analysis models at home and abroad, the researchers found that the training needs analysis in the field of environmental meteorology can provide useful reference for small and micro enterprises. The model emphasizes the importance of employee autonomy and need satisfaction, especially in the face of a rapidly changing market environment, where companies should pay more attention to the individual differences and needs of employees.

The evaluation of training effectiveness is a key part of optimizing training strategies. Existing studies have shown that the lack of an effective evaluation mechanism makes it difficult for small and micro enterprises to judge the actual effectiveness of training (Liu & Wang, 2021). In the study of corporate training effectiveness, Liang (2021) proposed a training effectiveness evaluation index system, aiming to provide enterprises with a scientific training effectiveness evaluation tool. This evaluation system takes into account not only the employee's academic performance, but also his or her ability to apply it in the real world. In addition, Gan (2011) emphasized the shortcomings of enterprises in the allocation of training resources, and believed that

the reasonable allocation of training resources can significantly improve the training effectiveness. Due to limited human and financial resources, small and micro enterprises often face the dilemma that it is difficult to quantify the effectiveness of training. Therefore, it is necessary to construct a set of training effectiveness evaluation mechanism suitable for small and micro enterprises to realize the optimization of training strategy.

The resource allocation of small and micro enterprises in employee training is often unreasonable, resulting in unsatisfactory training results (Liao, 2021). In this context, it is particularly important to optimize the allocation of resources to improve the training effectiveness. Research shows that companies can reduce resource waste by collaborating with external agencies to develop training courses (Yuan & Zhu, 2004). At the same time, according to the characteristics of small and micro enterprises, it is recommended to pay attention to flexibility and adaptability in training design. The course content should be dynamically adjusted according to the development stage of the enterprise and the needs of employees to ensure the practicality and effectiveness of the training. In addition, combined with modern information technology, the combination of online training and offline training can effectively improve the coverage and participation of training.

## **2.5 Conceptual Framework**

This study analyzes the influence of the four independent variables of employee training in small and micro enterprises on the training effectiveness

### **Independent Variables:**

#### **1. Training Teachers**

- 2. Training Content
- 3. Training Methods
- 4. Training Arrangements

**Dependent Variable:** Training Effectiveness

- Skill Enhancement
- Work Performance

The conceptual framework of this study is as follows:

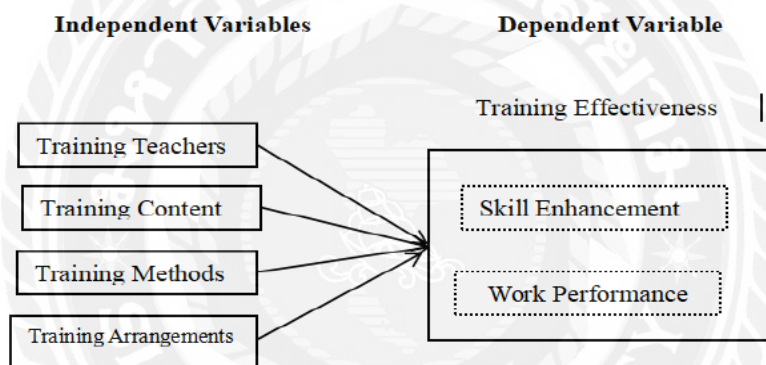


Figure 2.5 Conceptual Framework

## **Chapter 3 Research Methodology**

### **3.1 Research Design**

This study is a quantitative study. The research used a questionnaire survey to collect data, and used statistical analysis methods to process and analyze data, aiming to provide scientific suggestions and strategies for the education and training of employees in small and micro enterprises.

### **3.2 Population and Sample**

The population of this study was the employees of small and micro enterprises in Xi'an, Shaanxi Province. Using the method of random sampling, 300 employees were randomly selected from small and micro enterprises in different industries as the survey subjects. The sample size was determined at 300.

### **3.3 Hypothesis**

The hypotheses of this study are as follows:

H1: Training teachers have a positive impact on the training effectiveness, including employee skill enhancement and work performance.

H2: Training content has a positive impact on the training effectiveness, including employee skill enhancement and work performance.

H3: Training methods have a significant impact on the training effectiveness, including employee skill enhancement and work performance.

H4: Training arrangements have a positive impact on the training effectiveness, including employee skill enhancement and work performance.

### 3.4 Research Instrument

This study used a questionnaire survey as the main research tool to collect relevant data on employee training of small and micro enterprises in Xi'an, Shaanxi Province. The questionnaire design is based on the training needs analysis theory and the Kirkpatrick's Four-level Model, covering the training teachers, the training content, the training methods and the training arrangements.

The training effectiveness is based on Kirkpatrick's Four-level Model, and questions are designed from four dimensions: training response, learning effectiveness, behavior change, and training outcomes to measure employee satisfaction with training, skill improvement, and the impact of training on actual work. The Likert 5-point scale is used for scoring to ensure quantitative processing of data.

The questionnaire of this study includes two parts: the first part is the basic information of the respondents, including gender, age, education level, working years, number of trainings and training problem. The second part is a survey of the independent variables including training teachers, training content, training methods, training arrangement. Each variable is measured by items and rating scales.

**Table 3.4 Questionnaire Design**

Variable	Items	No.
Training teachers	The teacher's attitude is serious and the method is appropriate, which stimulates the interest of the students	Q1
	Teacher-student interaction effectively solves difficult problems	Q2
	The teaching process is well arranged, and all links are well prepared	Q3
	Teachers have solid basic knowledge and rich experience in corporate practice	Q4
	Training materials and audio-visual materials are useful and can be used for work	Q5
Training content	The training content is designed systematically, and the key and difficult points are highlighted	Q6

Variable	Items	No.
	The training content is practice-oriented and focuses on vocational skills	Q7
	The content of the training has a lot to do with my work	Q8
	The training content combines theoretical knowledge with practical skills	Q9
	The training content is novel and in line with the development trend of the industry	Q10
Training methods	I am very satisfied with the centralized face-to-face teaching method	Q11
	The role-playing style is very satisfying	Q12
	The case study panel was very satisfied	Q13
	I am very satisfied with the integrated way of demonstration and demonstration	Q14
	The training method is very good to meet the teaching needs	Q15
Training arrangements	The training schedule was good	Q16
	The training venue is well arranged	Q17
	Training support staff services are in place	Q18
	The training software and hardware facilities are complete and advanced	Q19
	The training environment is comfortable and conducive to learning	Q20
Training effectiveness	Able to deepen and refine the theoretical knowledge learned to colleagues	Q21
	Able to apply the teaching methods in the training to practical work and increase the work effectiveness	Q22
	Able to use the modern technology learned in the training to assist in the work	Q23
	Improving working methods and being recognized by colleagues stimulates interest in work	Q24

### 3.5 Reliability and Validity Analysis of the Scale

#### 3.5.1 Reliability analysis

Reliability analysis is mainly used to evaluate the internal consistency of each scale in the questionnaire to ensure that each item can measure the same variable stably and reliably. In this study, Cronbach's alpha coefficient was used to analyze the reliability of each scale, and the results are shown in Table 3.2.



**Table 3.5 Reliability Analysis**

	Clone Bach Alpha	Number of items
Train teachers	0.728	5
Training content	0.771	5
Training methods	0.749	5
Training arrangements	0.751	5
Training effectiveness	0.740	5
total	0.935	24

As can be seen from Table 3.2, the Cronbach's alpha coefficient of each scale is greater than 0.7, indicating that the questionnaire has a high internal consistency. Among them, the Cronbach's alpha coefficient of the training content was the highest, which was 0.771, indicating that the reliability of the scale was high. The total Cronbach's alpha coefficient was 0.935, which further indicated that the whole questionnaire had good internal consistency and reliability.

### 3.5.2 Validity analysis

Validity analysis is used to assess whether the measurement tool used in the questionnaire accurately reflects what is being measured. In this study, the validity of the questionnaire was analyzed by using the Kaiser-Meyer-Olkin (KMO) sampling appropriateness scale and the Bartlett sphericity test, and the results are shown in Table 3.3.

**Table 3.6 Validity Analysis**

The number of KMO sampling appropriateness.		.958
Bartlett sphericity test	Approximate chi-square	2628.608
	degree of freedom	276
	Distinctiveness	.000

As can be seen from Table 3.3, the value of KMO sampling appropriateness is 0.958, which is much higher than the standard value of 0.7.

### **3.6 Data Collection**

Data were collected through questionnaires. The questionnaire includes basic information, the training teachers, the training content, the training methods and the training arrangements. The questionnaire was distributed and collected through a combination of online and offline methods.

A total of 300 questionnaires were sent out and 271 valid questionnaires were collected. The effective recovery rate was 90.33%.

### **3.7 Data Analysis**

Descriptive statistical analysis, correlation analysis and regression analysis were mainly used for data analysis. Descriptive statistical analysis was used to summarize and describe the demographics of the sample. Correlation analysis was used to explore the relationship between variables. Regression analysis was used to validate the research hypotheses and to assess the extent to which the independent variable affects the dependent variable.

## Chapter 4 Findings and Discussion

### 4.1 Findings

This chapter presents the results of the analysis of data collected through a questionnaire. Firstly, the main variables were statistically described, and then descriptive statistical analysis was carried out to reveal the current situation and characteristics of employee education and training of small and micro enterprises in Xi'an, Shaanxi Province. The analysis includes the training teachers, the training content, the training methods and the training arrangements.

#### 4.1.1 Descriptive Statistical Analysis

From the analysis of 271 valid questionnaires, this study summarized the demographic characteristics of the respondents and their feedback on the training. Table 4.1 below presents the descriptive statistical analysis for the demographic characteristics.

Table 4.1 Descriptive Statistical Analysis

		Frequency	Percentage
1. Your gender:	male	162	59.8
	female	109	40.2
2. Your age:	20-29	61	22.5
	30-39	83	30.6
	40-49	43	15.9
	50-59	53	19.6
	Over 60	31	11.4
3. Your Highest Educational Qualification :	Below junior	17	6.3
	College	88	32.5
	Undergraduate	116	42.8
	Master's degree	36	13.3
	Ph.D. or above	14	5.2

4、 The time you have been engaged in relevant work in the enterprise is:	No relevant corporate work experience	28	10.3
	2 years and less	53	19.6
	3-5 years	95	35.1
	6-10 years	55	20.3
	over 10 years	40	14.8
5. How many times did you receive training in our company from 2023 to 2024	1 time	36	13.3
	2 times	72	26.6
	3 times	80	29.5
	4-5 times	53	19.6
	More than 5 times	30	11.1
6. What do you think may be a problem in this training based on the relevant training you have attended in the past?	Lack of effective organization of training	58	21.4
	The content lacks validity	62	22.9
	Lack of post-training service guidance	55	20.3
	The training time is long and the load is high	51	18.8
	Inappropriate selection of training specialists	45	16.6

Of the 271 respondents, 59.8% were male and 40.2% were female, indicating that men accounted for a large proportion of small and micro enterprises. The age distribution of respondents was relatively even, with 30.6% of respondents in the age group of 30-39 years old. This is followed by 20-29 year olds, with 22.5 %, and 50-59 year olds, with 19.6 %. Respondents with a bachelor's degree accounted for the highest proportion, at 42.8%; followed by college degree, accounting for 32.5%; The proportion of master's degree and doctoral degree or above is low, at 13.3% and 5.2%, respectively. Employees with 3-5 years of service have the highest proportion at 35.1%; followed by 6-10 years, accounting for 20.3%; 19.6% and 14.8% for less than 2 years and 10 years or more, respectively. In 2020-2021, the most employees received three trainings, accounting for 29.5%; followed by 2 trainings, accounting for 26.6%; 4-5 trainings

accounted for 19.6%. On the issue of training problem, 22.9% of respondents thought that "the content lacks effectiveness". This was followed by "lack of effective organization of training" and "lack of post-training service guidance", accounting for 21.4% and 20.3% respectively.

#### 4.1.2 Correlation Analysis

In this study, the correlation between five variables: training teachers, training content, training methods, training arrangements and training effectiveness was analyzed. Table 4.2 shows the Pearson correlation coefficient between the variables and their significance levels.

**Table 4.2 Correlation Analysis**

		Train teachers	Training content	Training methods	Training arrangement	Training effectiveness
Training teachers	Pearson correlation	1	.725	.743	.752	.752
	Significance (two-tailed)		.000	.000	.000	.000
	Number of cases	271	271	271	271	271
Training content	Pearson correlation	.725	1	.747	.746	.746
	Significance (two-tailed)	.000		.000	.000	.000
	Number of cases	271	271	271	271	271
Training methods	Pearson correlation	.743	.747	1	.726	.726
	Significance (two-tailed)	.000	.000		.000	.000
	Number of cases	271	271	271	271	271
Training arrangements	Pearson correlation	.752	.746	.726	1	1.000

	Significance (two-tailed)	.000	.000	.000		.000
	Number of cases	271	271	271	271	271
Training effectiveness	Pearson correlation	.752	.746	.726	1.000	1
	Significance (two-tailed)	.000	.000	.000	.000	
	Number of cases	271	271	271	271	271
. At the 0.01 scale (two-tailed), the correlation is significant.						

As can be seen from Table 4.2, there is a significant positive correlation between the training teachers, training content, training methods and training arrangements and the training effectiveness ( $P < 0.01$ ). Among them, the correlation between training arrangements and training effectiveness was the highest, and the Pearson correlation coefficient was 1.000, which indicated that training arrangements had a very significant impact on the training effectiveness. Other variables, training teachers, training content and training methods, showed high correlation coefficients with the training effectiveness of .752, .746 and .726, respectively. These results show that good training teachers, content, methods and arrangements play an important role in improving the training effectiveness.

#### 4.1.3 Regression Analysis

In order to further explore the influence of the independent variables on the dependent variable, multiple regression analysis was used to analyze the data, and the results are shown in Table 4.3.

**Table 4.3 Regression Analysis**

Model	Factors not normalized	Normalization factor	t	Distinctiveness	Colinearity statistics
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		B	Standard error	Beta			Tolerance	VIF
1	( Constant )	.018	.183		.100	.920		
	Training teachers	.361	.064	.328	5.669	.000	.367	2.726
	Training content	.302	.062	.289	4.854	.000	.346	2.887
	Training methods	.190	.067	.176	2.816	.005	.314	3.184
	Training arrangements	.131	.063	.121	2.089	.038	.368	2.716
Model	R	R square	Adjusted R side	Errors in standard estimates				
1	.821a	.673	.668	.666				
a. Predictors: (constants), training arrangements, training teachers, training content, training methods								

As can be seen from Table4.3, the respective variables (training teachers, training content, training methods, and training arrangements) have a significant positive impact on the dependent variable (training effectiveness). Among them, the standardization coefficient (Beta) of the training teachers was the highest, which was .328, indicating that the training teachers had the greatest impact on the training effectiveness, followed by the training content (Beta=0.289), training methods (Beta=0.176), and training arrangements (Beta=0.121). The R-squared value was 0.673 and the adjusted R-squared value was 0.668, indicating that the model explained 67.3% of the variation in the training effectiveness. The significance level was less than 0.05, indicating that the influence of the respective variables on the dependent variables was significant. The collinearity statistics showed that the tolerance values of the respective variables were all greater than 0.1, and the VIF values were less than 10, indicating that there was no serious multicollinearity problem. Therefore, the regression model has good stability

and explanatory power.

The results of regression analysis showed that the training teachers, training content, training methods and training arrangements had a significant positive impact on the training effectiveness, and the model had high explanatory power and stability. These results further validate the hypothesis of the study, indicating that it is of great significance to improve the quality of training teachers, optimize the training content, enrich the training methods and arrange the training reasonably.

## **4.2 Discussion**

The results of this study show that the training teachers, training content, training methods and training arrangements have a significant impact on the training effectiveness, which is consistent with the conclusions of the existing literature. Specifically, good training teachers and systematic, practice-oriented training content can improve the knowledge mastery and skill application level of employees; Diversified training methods can meet the learning needs of different employees and enhance the attractiveness and effectiveness of training; Reasonable training arrangements can provide a good training environment and support to ensure the smooth progress of training activities. However, there are some limitations to this study. First, the study sample is limited to small and micro enterprises in Xi'an, Shaanxi Province, and may not be fully representative of the training situation of small and micro enterprises in other regions and industries. Secondly, the data of the questionnaire mainly rely on the self-report of the respondents, which may have a certain subjective bias. Finally, the study only used quantitative analysis methods, and failed to explore the specific mechanism of training effectiveness.



## Chapter 5 Conclusion and Recommendation

### 5.1 Conclusion

This study analyzed the data from 271 valid questionnaire from small and micro enterprises in Xi'an, Shaanxi Province, and examined the impact of training teachers, training content, training methods and training arrangements on the training effectiveness. The results show that:

- 1) The quality of training teachers has a significant positive impact on the training effectiveness. Good teacher attitude, solid basic knowledge and rich enterprise practical experience can significantly improve the training effectiveness.
- 2) The systematic design and practice oriented training content can significantly improve the training effectiveness. The content is closely related to the actual work, and the training that can combine theoretical knowledge with practical ability is more effective.
- 3) The diversified training methods have a positive impact on the training effectiveness. Intensive face-to-face teaching, role play, case analysis and demonstration can meet the needs of different students and improve the training effectiveness.
- 4) The rationality and integrity of training arrangements have an important impact on the training effectiveness. Scientific training schedule, good training places, high-quality auxiliary services and advanced software and hardware facilities can improve the training effectiveness.

To sum up, the training teachers, training content, training methods and training arrangements are the key factors affecting the training effectiveness. Optimizing these factors can significantly improve the training effectiveness of employees in small and micro enterprises, and then improve the overall competitiveness of enterprises.

## **5.2 Recommendation**

Based on the conclusions of this study, the following suggestions are put forward to improve the effectiveness of employee training in small and micro enterprises:

- 1) Enterprises should pay attention to the selection and training of training teachers, and improve teachers' professional knowledge and practical experience. Teachers are encouraged to adopt diversified teaching methods to stimulate students' interest in learning.
- 2) The training content should be integrated with the actual work, focusing on the combination of theory and practice to ensure the practicality and pertinence of the content. Regularly update the training content to ensure that it conforms to the development trend of the industry.
- 3) Adopt diversified training methods, such as centralized face-to-face teaching, role playing, case analysis and demonstration, to meet the learning needs of different students. Select appropriate training methods according to training contents and objectives to improve the effectiveness of training.
- 4) Scientifically formulate the training schedule to ensure that the training time and frequency are moderate. Provide good training places and high-quality auxiliary

services to ensure that the training environment is comfortable and conducive to learning. Configure advanced software and hardware facilities to improve the training effectiveness.

### **5.3 Further Study**

Future research can be expanded to the following aspects:

1) Expand the research scope to small and micro enterprises in other regions and industries to verify the universality of the research conclusion.

2) In addition to questionnaire survey, interview, observation and other methods can also be used to collect richer and deeper data and reduce subjective bias. Using the qualitative research method, this paper explores the specific realization mechanism of training effectiveness, and reveals the interaction between various factors of training.

3) In the future, long-term follow-up research will be carried out to observe the continuity and long-term impact of the training effectiveness, so as to provide more comprehensive guidance for enterprise training. Through further research, we can better understand and optimize the employee training of small and micro enterprises, and improve the competitiveness and sustainable development ability of enterprises.

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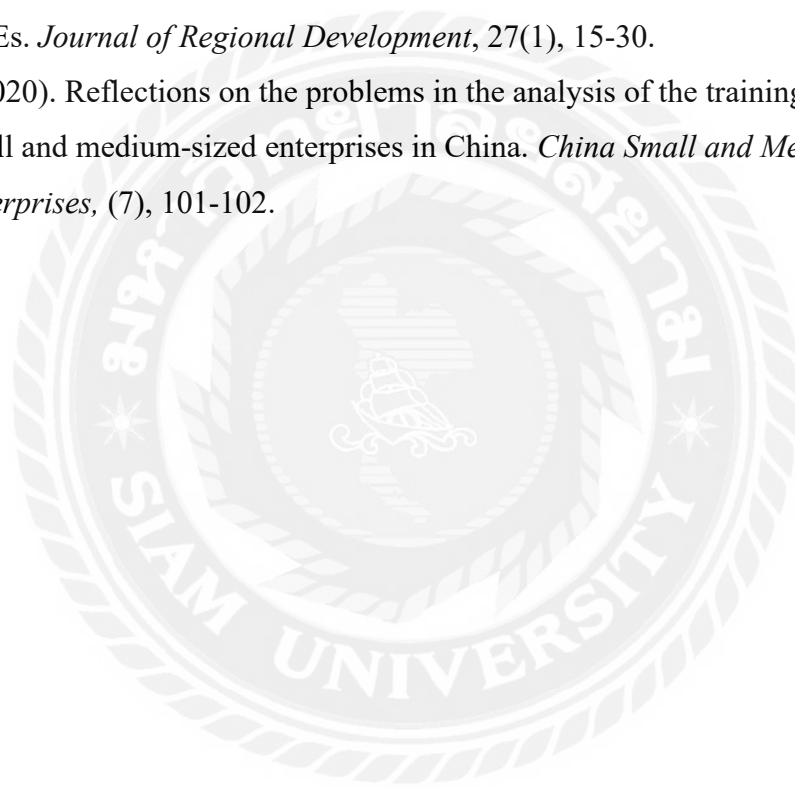
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## Appendix

### Questionnaire for the evaluation of education and training for employees of small and micro enterprises

Dear Respondents,

Hello! The information collected in this survey is for academic research purposes only, and is only used for group analysis and is not processed individually, so please feel free to answer without your name. All information you provide will be kept strictly confidential. Please fill in the basic information according to your actual situation and draw "✓" on the answer that matches your situation.

#### Basic Information

1. Your Gender:
  - A. Male
  - B. Female
2. Your age:
  - A. 20-29
  - B. 30-39
  - C. 40-49
  - D. 50-59
  - E. Over 60 years old
3. Your highest qualification:
  - A. Junior college

- B. Tertiary
- C. Undergraduate
- D. Master's
- E. Ph.D. or above
4. The amount of time you have been engaged in the relevant work in the company is:
- A. No relevant corporate work experience
- B. 2 years or less
- C. 3-5 years
- D. 6-10 years
- E. More than 10 years
5. How many times did you receive training in our company in 2020-2021?
- A. 1 time
- B. 2 times
- C. 3 times
- D. 4-5 times
- E. More than 5 times
6. Based on the relevant training you have attended in the past, what do you think may have been wrong with this training?
- A. Lack of effective organizational  for training
- B. Lack of effectiveness of content
- C. Lack of guidance  post-training services
- D. Long training time and high load

E. Inappropriate  for training experts

Each question in this questionnaire is followed by six grades, so please mark a " ✓ " on the option that best describes your situation.

1 = "Completely disagree"; 2 = "Majority disagree"; 3 = "Partial disagreement"; 4 = "Partial Consent" 5 = "Majority Consent"; 6 = "Completely agree"

Please answer the following questions: You are studying for.....

Training response assessment	topic	Completely disagree	Most disagree	Partially disagree	Partially agreed	Most agreed	Totally agree
Train teachers	1. The teacher's attitude is serious and the method is appropriate, which stimulates the interest of the students	1	2	3	4	5	6
	2. Teacher-student interaction effectively solves difficult problems	1	2	3	4	5	6
	3. The teaching process is well arranged, and all links are well prepared	1	2	3	4	5	6
	4. Teachers have solid basic knowledge and rich experience in corporate practice	1	2	3	4	5	6
	5. Training materials and audio-visual materials are useful and can be used for work	1	2	3	4	5	6

Training response assessment	topic	Completely disagree	Most disagree	Partially disagree	Partially agreed	Most agreed	Totally agree
Training content:	6. The training content is designed systematically, and the key and difficult points are highlighted	1	2	3	4	5	6
	7. The training content is practice-oriented and focuses on vocational skills	1	2	3	4	5	6
	8. The content of the training has a lot to do with my work	1	2	3	4	5	6
	9. The training content combines theoretical knowledge with practical skills	1	2	3	4	5	6
	10. The training content is novel and in line with the development trend of the industry	1	2	3	4	5	6
Training methods	11. I am very satisfied with the centralized face-to-face teaching method	1	2	3	4	5	6
	12. The role-playing style is very satisfying	1	2	3	4	5	6
	13. The case study panel was very satisfied	1	2	3	4	5	6

Training response assessment	topic	Completely disagree	Most disagree	Partially disagree	Partially agreed	Most agreed	Totally agree
	14. I am very satisfied with the integrated way of demonstration and demonstration	1	2	3	4	5	6
	15. The training method is very good to meet the teaching needs	1	2	3	4	5	6
Training arrangement	16. The training schedule was good	1	2	3	4	5	6
	17. The training venue is well arranged	1	2	3	4	5	6
	18. Training support staff services are in place	1	2	3	4	5	6
	19. The training software and hardware facilities are complete and advanced	1	2	3	4	5	6
	20. The training environment is comfortable and conducive to learning	1	2	3	4	5	6
Training effectiveness	21. Able to deepen and refine the theoretical knowledge learned to colleagues	1	2	3	4	5	6
	22. Able to apply the teaching methods in the training to practical work	1	2	3	4	5	6

Training response assessment	topic	Completely disagree	Most disagree	Partially disagree	Partially agreed	Most agreed	Totally agree
	and increase the work effectiveness						
	23. Able to use the modern technology learned in the training to assist in the work	1	2	3	4	5	6
	24. Improving working methods and being recognized by colleagues stimulates interest in work	1	2	3	4	5	6

