

Research on the Construction of Training Package System for Skills of Chinese Construction Migrant Workers under the Integration of Academic Education and Training

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Abstract—The article constructed the training system for construction migrant workers, which integrates academic education and training. With these methods such as document research, questionnaire survey, individual interview and brainstorming, the article completed basic skills training of migrant workers. At the same time, the article exploited the teaching system and teaching resources. The system and resources are integrative for vocational secondary school, higher vocational college and vocational undergraduate education. The system putted the importance on the compatibility, interoperability and the authority of certification. In the result, the article constructs the training system of construction technology specialty. The article completes the training package of construction technology specialty, the training package of core courses and the resource package of core courses.

Keywords—Construction Migrant workers; Training package; Academic Education; Training

I. INTRODUCTION

In April 2019, State Council meeting discussed and passed the implementation plan of expanding the enrollment of 1 million people in Higher Vocational colleges. Migrant workers were the important part trained. It has become an urgent task to constructed vocational skills promotion system of integrating academic education and training for the migrant workers^[1]. Statistics show that the new generation of peasants born in 1980 and later has gradually become the main body of migrant workers^[2]. At present, professionals among migrant workers are lack^[3]. The number is low who have received professional training^[4]. In china, vocational skills training for construction migrant workers mainly focuses on improving the technical and academic level^[5]. How to transform construction migrant workers into professional workers^[6], and how to improve the overall cultural level, have become a key issue for China's construction industry to transform^[7]. Construction migrant workers need to receive education in vocational colleges^{[8][9]}.

The training system of construction migrant workers

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abroad has been relatively mature.^{[10][11]}. In China, the researchers carried out active exploration and research in order to improve the professional quality and skills for construction farmers^{[12][13][14]}. In China, the skills improvement of construction migrant workers is limited to short-term training and how to explore and improve the shortcomings^{[15][16]}. Systematic training system is Lesly constructed^{[17][18]}. The combination between training and skill education, the integration of training and academic education, are still in the stage of theoretical discussion.

This research adopted literature research, questionnaire, individual interviews and brainstorming. Based on the training package, the article constructed the training package system, realized the unified government management, and formulated the unified criteria for improving the skills of migrant workers. Finally, in the case of the integration of vocational training and academic certification, the article achieved integrative promotion system. Aiming at migrant workers, this policy ultimately promotes vocational colleges to expand the training scale. At the same time, the government should speed up the connection between diploma certificates and vocational skill certificates, and promote equal treatment for Higher Vocational graduates.

II. SKILLS IMPROVEMENT SYSTEM FOR MIGRANT WORKERS

Taking the construction technology specialty of civil engineering as an example, under the unified government management, this article studied how to realize skills upgrading system for migrant workers by the combination of vocational training and diploma education.

A. Professional Qualification Framework

The cultural level of modern peasants has generally improved, and junior high school education is the main part^[2]. This article investigated the construction enterprises needs for migrant workers, and classified and located the positions from grades I to IV. Finally, to realize unified Standards and integrate the academic education and vocational qualification training. TABLE I is showed as follow.

TABLE I. PROFESSIONAL QUALIFICATION FRAMEWORK OF CONSTRUCTION MIGRANT WORKERS

Level	Educational level	Skills appraisal and Diploma	educational level	Application of Knowledge and Skills	Post
Level I		Skills upgrading Appraisal certificate	Primary school	Skill application Level I	Level I post 1
					Level I post 2
					Level I post 3
				
Level II	Vocational secondary School	Graduation Certificate of Vocational secondary School	Junior middle school	Skill application Level II	Level II post 1
				
Level III	Higher Vocational College	Graduation Certificate of Higher Vocational College	senior middle school	Skill application Level IV	Level III post 1
				
Level IV	Higher vocational undergraduate	Graduation Certificate of Higher vocational undergraduate	senior middle school	Skill application Level V	Level IV post 1
				

B. Professional Training Package

On the basis of a unified qualification framework, the government accurately determined the skills requirements and environmental characteristics of Construction Migrant workers, and developed corresponding personnel training programs and

courses. And the government completed the professional training package coding.

- Training Package of Professional Training Program
- TABLE II is showed as follow.

TABLE II. TRAINING PACKAGE TRAINING PROGRAM OF CONSTRUCTION TECHNOLOGY SPECIALTY

Major categories	major	Level	Post	Working environment of post	Training package of talent Cultivation Plans	Educational level
Civil Construction	Construction Technology Specialty	Level I	Post 1	The working environment of Construction Migrant workers should be Investigated. This lays the foundation for the determination the quality requirements of talents and the formulation of assessment programs.	Post 1	Appraisal certificate
			Post 2		Post 2	
			Post 3		Post 3	
			
		Level II	LevelIIPos1		Professional Talents Cultivation Plans	Vocational secondary Schools
				Professional Talents Cultivation Plans	
		Level III	Level III Post1		Professional Talents Cultivation Plans	Higher Vocational College
				Professional Talents Cultivation Plans	
		Level IV	Level IV Post1		Professional Talents Cultivation Plans	Higher vocational undergraduate
				Professional Talents Cultivation Plans	

• Training Package Curriculum

Training units must develop curriculum resources and

assessment programs in accordance with the requirements of training package curriculum. TABLE III is showed as follow.

TABLE III. ELEMENTS OF COURSE TRAINING PACKAGE

Course coding	Course Training Package identified the source and content areas of training packages.
Course title
Application properties	Application in the workplace
Prerequisite courses
Elements and Standards of Capability Unit	Course Training Package covered the main contents and standards.
basic skill	Basic Quality Requirements
Skill requirement	Skill
Knowledge requirement	Knowledge
Assessment requirements	It needed to stipulate the assessment content, and meets the assessment criteria, assessment environment and so on.

C. Core Course Teaching Resources

Teachers in training institutions should develop teaching resources according to the curriculum training package. Although the format and content are not uniformly stipulated, it is necessary to develop teaching resources suitable for the characteristics of Construction Migrant workers.

- **Talent training mode:** On the basis of suitable training mode such as apprenticeship, order training, part-time work and part-time study, Teachers should fully consider the needs characteristics of Construction Migrant workers. Time factors and economic conditions should be taken in account in order to develop Peasantry talent training mode. Besides, Teachers should adopt flexible education system and pluralistic mode to develop the system which is composed by mutual recognition of four-level credits.

- **Assessment criteria:** It needs to cover all the relevant elements and standards in the course training package, to meet the requirements of skills, knowledge and basic quality, and to meet the requirements of the course training package for assessment.

- **Skills Tasks:** It is necessary to cover the elements and standards of the course training package and to meet the skill requirements.

- **Knowledge Tasks:** It needs to cover the elements and standards of the course training package and to meet the requirements of knowledge.

- **Assessment tasks:** Students need to master the content, form, requirements and environment of assessment. Assessment fully embodies the characteristics of fairness, flexibility, effectiveness and reliability.

D. Teaching methods

Construction migrant workers have strong goals, but they are not good at logical thinking. We should use network resources, video teaching, demonstration and other intuitive teaching methods for training. As peasant workers being the main learning, training teachers mostly use on-site teaching and avoid all time classroom teaching.

III. CONCLUSION

The final results of this study include thesis, training system, and training package of talent training program, core curriculum training package, and core curriculum teaching resources. The research results serve for secondary, higher vocational colleges or other training institutions. It is necessary that vocational colleges expand the scale of training for the migrant workers of construction. Finally, the research realized the ideal goal which was "parallelism" of training and academic upgrading of Construction Migrant workers, forming "training package" of the teaching resources skills and assessment, and the "integration" of the platform for improving the vocational ability of construction migrant workers. Fig. 1 is showed as follow.

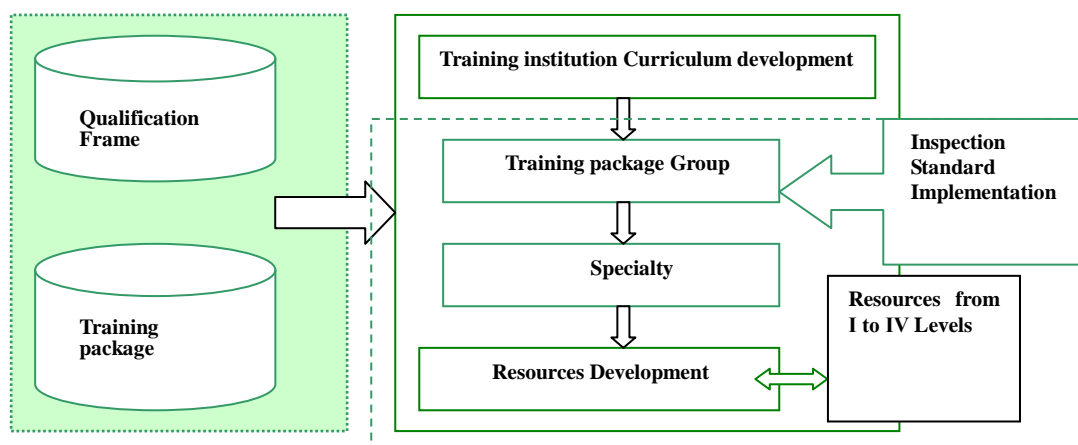


Fig. 1. Training Package system for the Construction Migrant Workers

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