

# Embrace Industries and Integrate Industry into Education

## Build an Application-Oriented Talent Training and Gathering in the Automobile Transportation Industry that Improves Local Economic Development

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**Abstract-**By analyzing and summarizing the achievements and experiences of School of Transportation and Automobile Engineering of Panzhuhua University in terms of integration of industry and education, this paper demonstrates the necessity of deepening the depth and increasing the level of integration of industry and education, forming an automobile transportation industry alliance centers on the integration of industry and education, creating an application-oriented talent training and talent aggregation highland to serve local economic development.

**Keywords-***integration of industry and education, automobile transportation, highland*

### I. INTRODUCTION

Undergraduate Vocational Education (Applied Technology Undergraduate) is an adjustment of educational system after the report of the Eighteenth National Congress of the Communist Party of China, which put forward "Expediting the development of modern vocational education and promoting the connotative development of higher education". The core of Undergraduate Vocational Education (Applied Technology Undergraduate) is the integration of industry and education. On May 2, 2014, the Decision of the State Council on Accelerating the Development of Modern Vocational Education (The State Council [2014] 19) pointed out the following aspects. Firstly, promoting the innovation of talent training mode. Insisting on school-enterprise cooperation, work-integrated learning, strengthen teaching, learning and practical training integrated education and teaching activities. Besides, pushing the teaching modes such as item teaching, case teaching and work process-oriented teaching. And then, increasing the scale of practical training in teaching process and innovating the

forms of students' internship and strengthening the practice or training evaluation system which aims to educate people. Beyond that, setting up the insurance system about students' practice responsibilities. Actively carry out certificates system for academic and vocational qualification certificates. In addition, integrating schools into enterprises to educate people. Carrying out vocational skills competition. <sup>[1]</sup>The Third Plenary Session of the Eighteenth Central Committee of the Communist Party of China decided to "speeding up the construction of modern vocational education system, deepening the integration of industry and education, school-enterprise cooperation, and training high-quality workers and skilled personnel." In the Opinions on Deepening the Integration of Industry and Education issued by the General Office of the State Council on December 19, 2017 (General Office of the State Council [2017] 95), which pointed out that "Deepening the Integration of Industry and Education and Promoting the Organic Linkage of Education Chain, Talent Chain, Industry Chain and Innovation Chain are the urgent requirements of promoting the structural reform of the supply of human resources." <sup>[2]</sup>The report of the Nineteenth National Congress of the Communist Party of China put forward the following proposals: improving vocational education and training system, deepening the integration of industry and education, school-enterprise cooperation; putting forward the co-construction of training bases for double-professionally-titled teachers in high-level schools and large and medium enterprises; supporting the development and application of virtual simulation training system matched with professional courses; promoting distance teaching between teaching process and production process; speeding up first-rate universities and first-class enterprises. The construction of streaming disciplines will realize the connotative development of higher education.

The orientation of Panzhuhua College (hereinafter referred to as the school) is: type orientation "application-oriented"; level orientation "undergraduate education as the main part, and actively develop postgraduate education"; disciplinary professional orientation "engineering-oriented, multidisciplinary harmonious development"; training target orientation "cultivating senior specialized talents with creative spirit, career consciousness and professional ability"; service orientation "keep a foothold of Panzhuhua and Xichang area, face the west of China, radiate the whole country, the most important is serving the local economic development and the comprehensive development and utilization of regional resources"<sup>[3]</sup>; the goal of development is to "build an application-oriented first-class university". In five years, we will build a demonstration University for integration of industry and education, transformation and development, and rank in the forefront of the same kind undergraduate colleges and universities in an all-round way.

The College of Transportation and Automobile Engineering (hereinafter referred to as the College) is the second-level teaching unit to train applied senior specialists in automobile transportation.

In recent years, The College deepening the depth and increasing the level of integration of industry and education, forming an automobile transportation industry alliance centers on the integration of industry and education, creating an application-oriented talent training and talent aggregation highland to serve local economic development.

## II. EMBRACE INDUSTRIES, CREATE TO INTEGRATE INDUSTRIES INTO EDUCATION AND SCHOOL-ENTERPRISE COOPERATIVE EDUCATION SYSTEM

### *A. Integration of Industry and Education, Innovate to Build Undergraduate Education Application-Oriented Personnel Training System*

Focusing on the cultivation of applied technical talents, taking specialty construction as the leading factor, taking the integration of industry and education as the path, teaching process and quality control as the grasp, and centering on the goal of talent cultivation, the teaching system of Applied Talents Cultivation with four levels and seven modules is constructed through effective teaching organization.

Four levels: Around the goal of talent cultivation, the first level of integration of theory and practice is formed through effective teaching organization and integration of industry and education, the second level of seven-module form of teaching connotation construction, the third level of specific content construction of teaching guided by specialty construction, and the fourth level of talent cultivation goal based on applied talents.

Seven modules: professional construction as the core module; teaching quality as the main module; teaching style and learning style as the key module; teaching management as the guarantee module; teaching research and reform as the innovation module; integration of industry and education as the path module; quality engineering as the promotion module.

Figure 1.1 is the undergraduate education application-oriented personnel training teaching system.

### *B. Embracing Industries and Exploring the Path of Training Applied Talents for College Undergraduates*

The college, together with relevant industries and enterprises, has continuously explored the training path of Applied Talents in undergraduate education. It has formed a three-point and one-line "result-oriented" talent training path of "student-centered, professional education goal-professional achievement-curriculum achievement".

Figure 1.2 is the training path of applied talents for undergraduates.

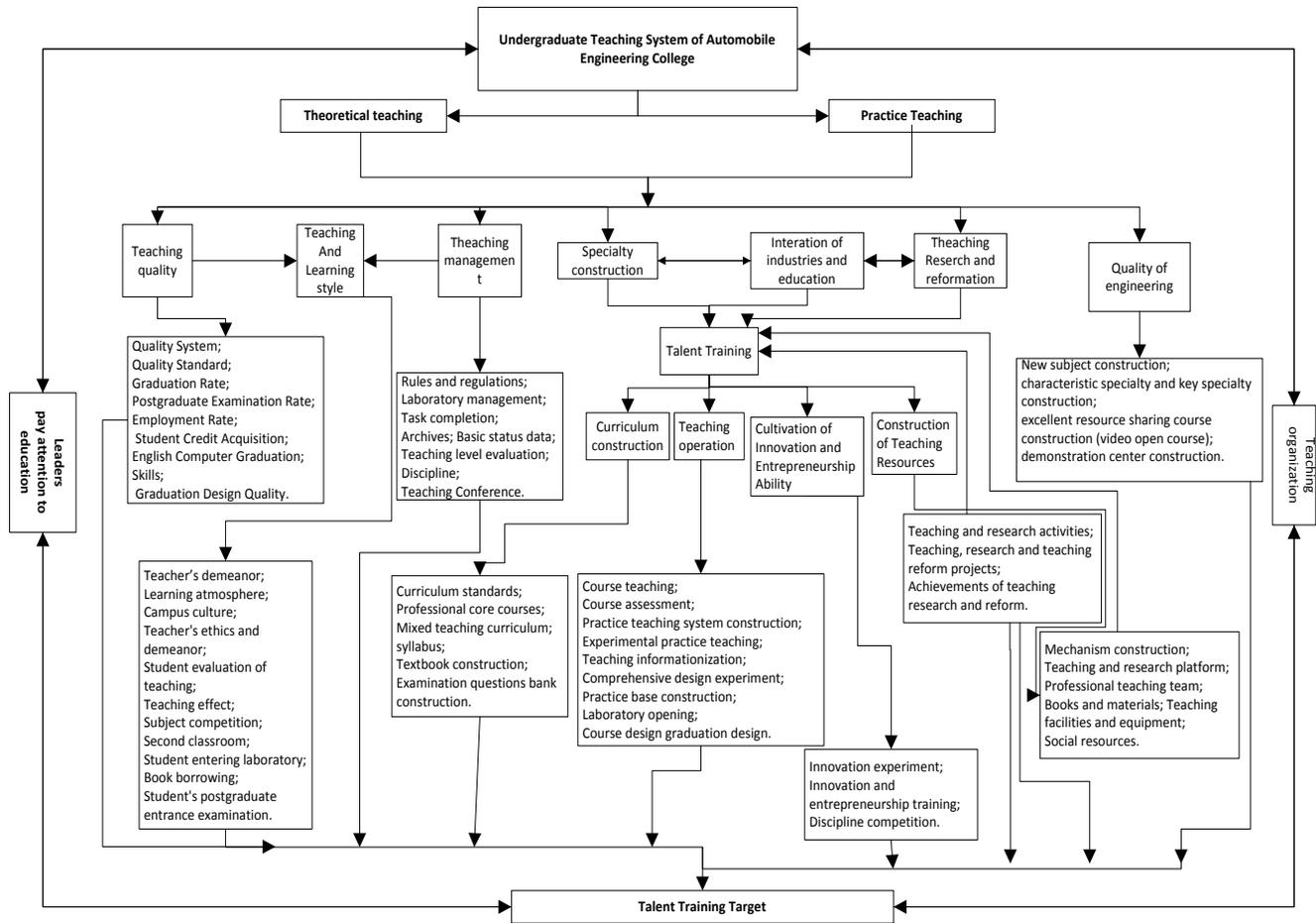


Figure 1.1 Teaching system of applied talents training in college

### III. BUILDING A HIGHLAND FOR TRAINING APPLIED TALENTS AND CONCENTRATING TALENTS IN THE AUTOMOBILE TRANSPORTATION INDUSTRIES TO SERVE THE ECONOMIC DEVELOPMENT IN PANZHIHUA

#### A. Keeping Pace with the Times, Deepening the Integration of Industry and Education, Upgrading the Level of it and Education are the Basic Ways to Build the Highland of Applied Talents Training in Automobile and Transportation Industries.

At present, the integration of industry and education mainly relies on enterprises, integrates education, teaching and engineering training as a whole, and carries out talent training guided by enterprise talent demand. Its distinct characteristic is "relying on enterprises". Is the "1.0 Age" of the Integration of Industry and Education [4] [5].

With the development of science and technology, education and teaching, especially the application of "Internet +" modern new technology in education and teaching, we need to deepen the integration of production and teaching and enhance the integration of production and

education. One is the integration of modern technology means, such as virtual simulation and information technology, with the deep integration of information technology and education, which is fully applied to the process of education and teaching, and the experience of embedded learning through "Internet +"; and the two is from the perspective of learning. To support enterprises to embrace the industry, form a strategic alliance of automobile transportation, build production-oriented schools and educational enterprises, promote the high-quality development of automobile transportation industry, enter the era of integration of production and education, and create a highland for training applied talents in automobile transportation industry[5][6].

#### B. Embracing Industries and Expanding the Path of Integration of Industry and Education are the Fundamental Measures to Build the Highland of Application-Oriented Talents in Automobile Transportation Industry.

Establishing a cooperative school-running and cooperative governance mechanism with the participation of schools, local governments, industries, enterprises and

communities, absorb the personnel of industrial enterprises into the professional Steering Committee of the college, and jointly build a "vanadium-titanium+" automobile traffic professional cluster that connects the automobile traffic industry chain and innovation chain; professors and experts from the college enter Panzhihua Automobile Industry Association and Road Traffic Association to participate in the regulation. To plan the development of local automobile transportation industry, take the lead in

formulating standards for automobile industry associations and road traffic associations, promote the rapid and in-depth integration of Panzhihua automobile transportation industry into industrial upgrading, and create a high concentration of Applied Talents in automobile transportation industry [7].

Figure 2.1 is the map of the Highland for Training Applied Talents and Concentrating Talents in Automobile Transportation Industries

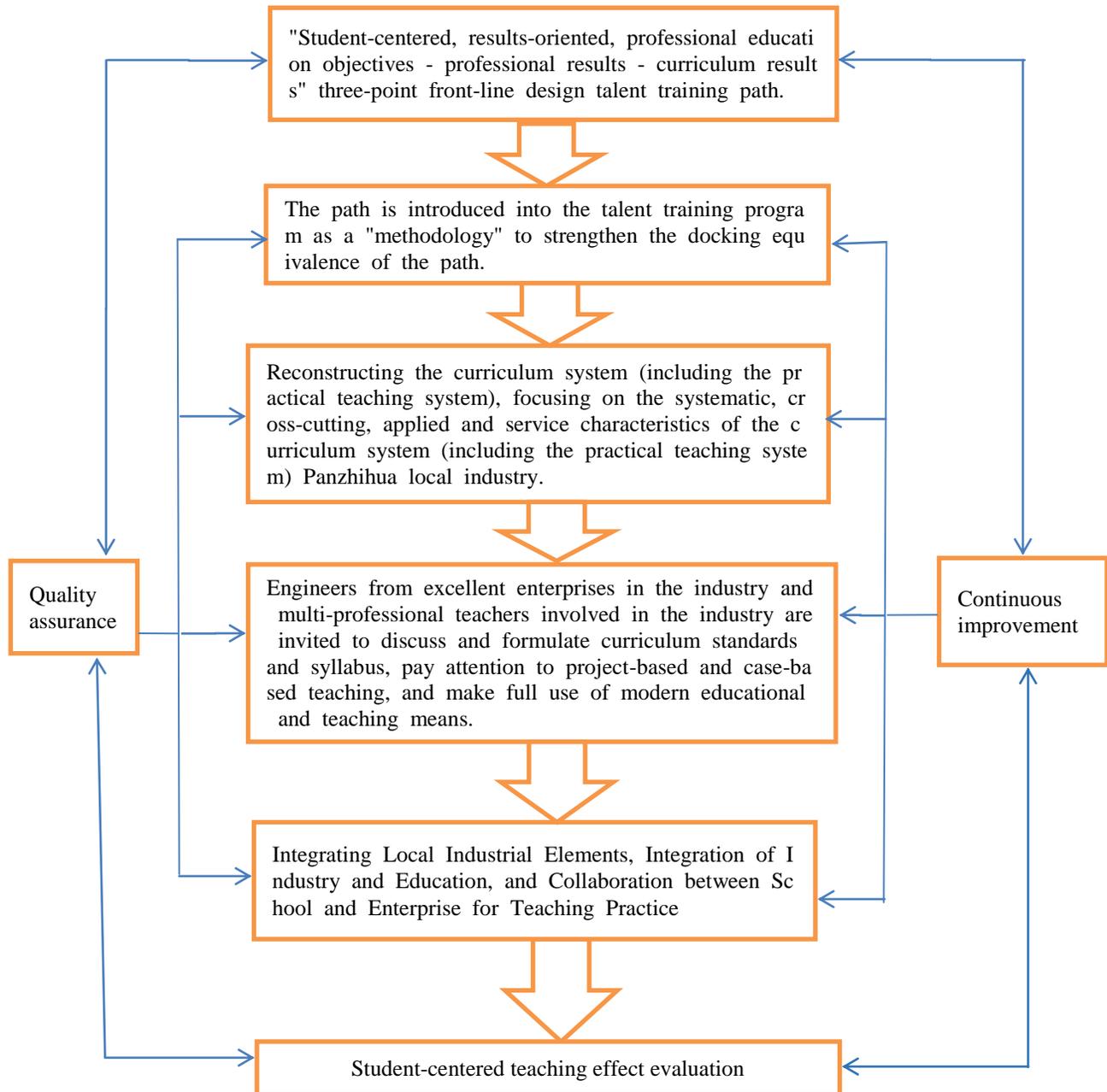


Figure 1.2 The path of training applied talents for undergraduates in college

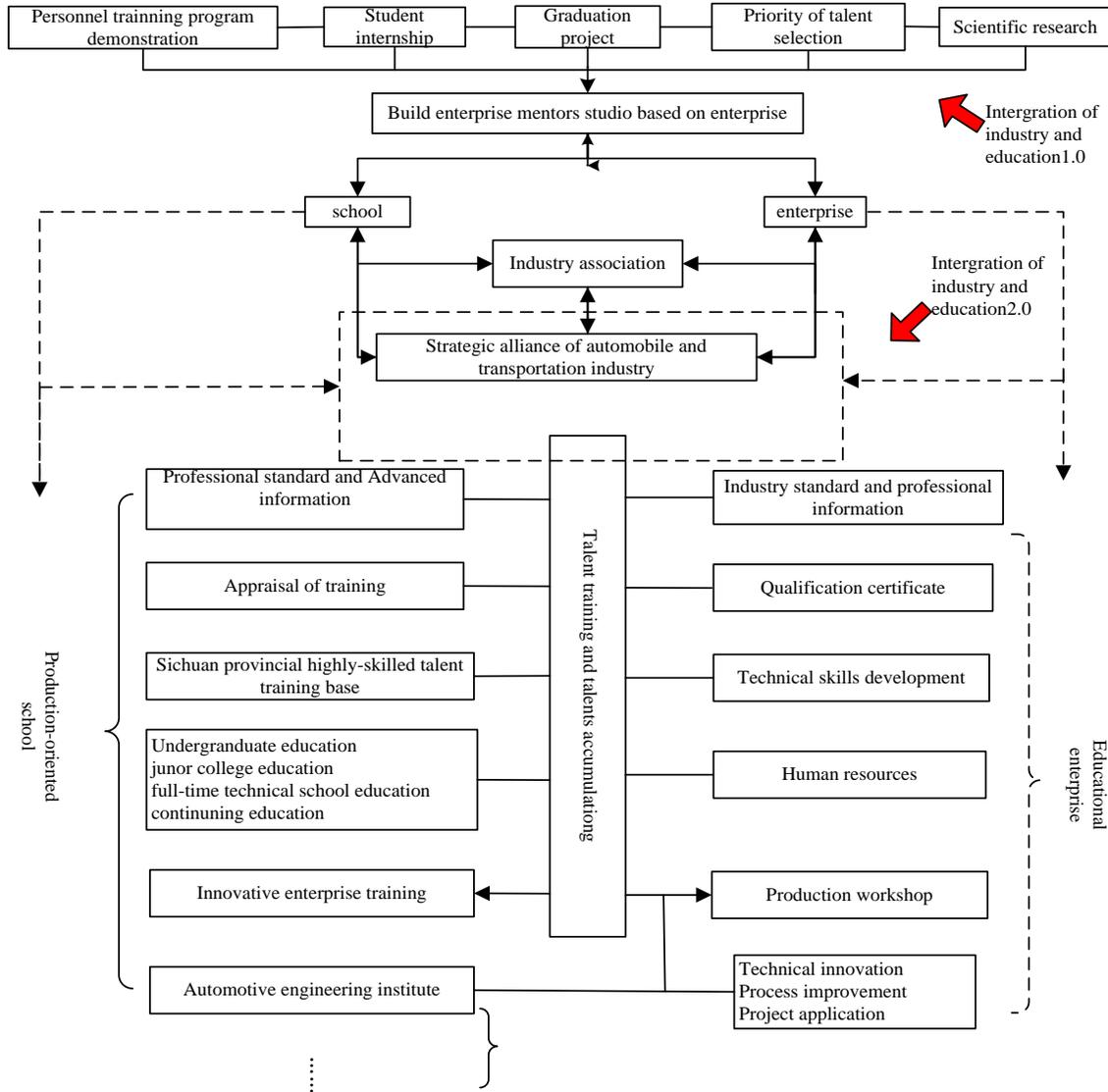


Figure 2.1 Construction of applied talents training and talents gathering heights in automobile transportation industries

#### IV. CONCLUSION

Under the background of the country's active demand for deepening the integration of industry and education, the school has built a demonstration school that integrates industry into education, transformation and development, ranked in the front rank of similar undergraduate colleges and universities in an all-round way, opened a key period of the new journey of building an application-oriented first-class university, analyzed and summarized the achievements and experiences of the college in the integration of industry and education, and formed a realistic path of the integration of industry and education, school-enterprise collaborative education, innovation. Integration of industry and education with school-enterprise collaborative education system, deepening the integration of industry and education and upgrading the integration of industry and education, forming an automotive

transportation industry alliance centered on integration of industry and education, jointly discussing academics, conspiring to cooperate and promoting, creating an applied talent training and Talent Gathering highland for automotive transportation industry serving local economic development, and promoting the education of Panzhihua Automobile Transportation Industry and the high-quality education development or Panzhihua College<sup>[7]</sup>.

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The project of Panzhihua University's education and teaching research and Reform in 2018 is "serving vanadium

and titanium industry, integration of industry and education, construction and practice of Applied talents training mode of new disciplines coordinated by schools and enterprises" (JJ1820).

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