

# Basic Research Development of Local Colleges and Universities Transition

—A Case Study of Yangtze University College of Engineering and Technology

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**Abstract-** In order to steadily promote school restructuring and development, application of technology to improve the quality of talents training, school-based research paper uses case studies and other methods proposed restructuring and development of local colleges and universities need to study the basic conditions of the proposition, research-based foundation from school conditions, teaching and based on three aspects of cooperative Education, Yangtze University of Engineering and Technology for the analysis, the conclusion is: Yangtze University College of Engineering and Technology in order to further serve regional economic and social development, service industries and enterprises and technological progress, the ability to enhance the application of technology student services has laid a good foundation the basic prerequisite for development with the transition.

**Key words-** Local Colleges; restructuring and development; infrastructure; Application Technology

October 21, 2015, "the National Development and Reform Commission Ministry of Education, Ministry of Finance guidance on the part of the local Ordinary Universities guide to the application transformation of" made clear that "the university and lead the country to adapt to economic development from the new normal, service innovation-driven Starting the overall development, increasing the importance of the work of restructuring and development, the urgency of understanding in an important position of the current work, the spirit of reform and innovation, promote the restructuring and development of some colleges and Universities. "(1) restructuring and development of local colleges and universities, first To focus on innovation-driven development, Chinese manufacturing 2025, Internet +, public innovation and entrepreneurship Peoples, "along the way" and other major national strategy, identify the focus of the restructuring and development of a breakthrough, really enhance the capacity of regional economic and social development, in order to ability to service industries and enterprises of technological progress, the ability to create value for learners (2). Secondly, we must carefully analyze and study the basic situation of the school, to understand their own school restructuring and development of the basic conditions, clear the main direction of development of the transition, identify the entry point for the restructuring and development, restructuring and development program to develop practical on this basis. In this paper, engineering

technology, Yangtze University, for example, do some basic questions on the restructuring and development of local research universities. I believe that the basis of the restructuring and development of local colleges and universities, including at least the following aspects.

## I. BASIC SCHOOL CONDITIONS

Local colleges and universities transformation and development, the most important is to have a school in line with the basic conditions for economic and social development and personnel training needs of the region. Therefore, the conditions for school self-assessment is a prerequisite for the restructuring and development of research.

Yangtze University College of Engineering and Technology in 2004 by the Ministry of Education approved the establishment of a full-time undergraduate college, is currently the only one in Hubei oil so the main subject for the characteristics, chemicals, machinery, electronics and information and civil engineering as the backbone of both Multidisciplinary independent college paper tube. College is located in the middle reaches of the Yangtze River in the historical and cultural city - Jingzhou, beautiful campus environment, was named the Hubei Provincial Government for the garden-like school. Now with resource exploration Engineering, Petroleum and Chemical Engineering, Information Engineering, Mechanical Engineering, Institute of Urban Construction, Management College, School of Foreign Languages, basic education department, Department of Physical Education, the Ministry of ideological and political theory, petroleum research new technologies The Information Technology Research Institute, Institute of Applied Chemistry and other teaching and research institutions, offers 24 undergraduate majors, 11 specialties, the existing 7849 students. College of the existing 82 laboratories, a stable internal and external training base 83, the library collection 3692000, teaching, and research equipment to reach more than 4,500 million. Taught in college full-time teachers 456 people, including 85 professors, Dr. 35, master degree or above and 307 teachers, senior teachers accounted for 33.8 percent, and employed full-time foreign teachers Britain, the United States and other countries.

The college has always adhere to the "everything for the students' educational philosophy, to serve the

community for the purpose of adhering to the "integrity, responsibility, harmony, Duxue" motto, the characteristics of school through college development has always been, according to adapt to the needs of society to adapt to the characteristics of students of law education, culture adaptability, strong sense of innovation and strong entrepreneurship, welcomed by the business' line engineer", "Frontline economist", "front-line management division" (3). At the 11th China International Education Innovation Summit brand, Yangtze University of Engineering and Technology was awarded the "2012 China's most brand value of the Independent College" title.

College adhere to open schools, pay attention to order training (4), has been with the Oilfield, Shanghai SK Petroleum Equipment Co., Ltd, Midea Group, Hubei Hang Lung Enterprise Group, Xinjiang Oilfield Technology Services Co., Ltd. Huapeng more than 400 enterprises to establish a school-enterprise cooperation. Since the schools, the quality of graduates has won wide recognition of social and employers, graduates agreement employment rate has remained above 90%. Exam achievements of 2012 graduates postgraduate admission rate ranked first in the province's colleges and universities of its kind, 2011--2014 admitted to the rates were 13.0%, 18.4%, 15.28%, 12.23%. The average monthly income of graduates one year after its kind in provincial universities ranked second undergraduate, specialist ranked fourth. 2008-2014 years, to participate in national and provincial level in various disciplines of knowledge, skills competitions, the students won a national award 65 / person, access to provincial and ministerial level awards 263 / year, winning nine utility model patents. Faculty research published annually more than 200 papers, including the core more than 30 articles; college bear more than 50 research projects in the petroleum, machinery, chemicals, information, civil engineering and other disciplines, has made gratifying achievements in scientific research. Since 2008, college graduates totaled 13,500 people. Personnel Training Academy high quality, good reputation of the community, by employers welcome and praise. Bachelor authorized in 2012 in Hubei Province to assess the degree to organize the college has made 20 undergraduate majors all through, without any qualification entirely by experts voted unanimously adopted the "three-wide" successful outcome.

## II. BASIC TEACHING AND RESEARCH

Since the founding, the College always attached importance to scientific research and educational reform, the establishment of teaching and research fund, organized each year around 20 teaching reform project approval, for special financing, encouraging teachers to study teaching philosophy, teaching methods, teaching content, teaching mode, promote the improvement of teaching and research capacity of teachers, teaching level. College to focus on running characteristics of the theory and practice, the application is approved in 2006 the National Education Science "five" project "Theory and Practice of Independent College Running Characteristics - Yangtze University of Engineering and Technology", the school of thought on college talent Training orientation, training model,

teaching management, school-enterprise cooperation, problem teaching, the students practice, personnel management, student management and other aspects were discussed and practice, theory and practical results achieved double harvest. The mobilization of a full-house research capabilities to achieve the theoretical research and practical research synchronous operation, both series of theoretical results obtained, six books published studies, research papers published more than 100 papers, and harvest the results of the characteristics of school practice, forming with its own characteristics and mode of educational philosophy, the performance in the following aspects: First, the proposed "two adaptation" theory, concise characteristic guiding ideology. That is "fully implement the Party's education policy, all students of educational philosophy, social services for the purpose, adhere to carry forward the integrity, responsibility, harmony, Duxue character ethos, the characteristics of school through college development has always been, according to adapt to the needs of society, students adapt Regular Characteristics of education, culture adaptability, strong spirit of innovation, entrepreneurial skills and strong characteristics of practical talents. "The second is to explore the personnel training specifications, form a unique program of practical talents. Press personnel training must adapt to social and economic development needs, teaching must be adapted to the characteristics of college students, college intensify reform training program, the implementation of the "two compression, two strength", ie the total hours of compression, compression theory hours; strengthen practical skills culture, strengthen social adaptation ability. Theorized enough, focusing on the application of the guiding ideology, the theory and practice of undergraduate adjusted to 6 hours in theoretical classes: 4 hours of theory and practice specialties adjusted to 5: 5, the practical skills development into the right path a more prominent position. The third is to strengthen the teaching management, implementation of process management model (5). The past teaching, training to pass the exam in order to focus on training for the target change and improve students' practical ability, application ability, innovation ability as the goal. The assessment rates broken down into teaching process, the students' attention to the process of teaching among teachers. Develop a teaching process management implementing regulations, the implementation of the teaching process management as the main content of teaching assessment annually for teachers teaching process management reform theoretical training specific operation, solves the teaching suited to the characteristics of students and practical The problem. Fourth, the implementation of the club system, the formation of Physical Education Features (6). After completing physical training courses, to strengthen students' individual sports skills, the formation of special interests and skills, in order to develop a lifelong habit of physical exercise. From September 2007 after the completion of the basic qualities of Physical Education training courses in the first semester, second semester began to take the Club, also open many doors sports skills classes, students can choose their favorite and

physiological conditions for their own motion 1 -2 item for the special training, the school and extra-curricular activities closely together, to teach the lesson, after-school training, lifelong sports habit. Physical education club system to avoid existing university physical training program, less individual class, students cope as curriculum, completion of the common problems would be lost. Physical Education Club System welcomed by the students, and college students in community activities and constitute the organic links, promote and university students active in extracurricular activities. Fifth, establish school-enterprise cooperation, form a culture of school-enterprise co-educational characteristics mechanism. College established the school-enterprise cooperation committee, set up the Cooperative Education and Employment Guidance to strengthen ties with enterprises (7). Henan Oilfield, the Zhongyuan Oilfield, Huabei Oilfield, Oilfield, Dagang Oilfield, and other oil companies, and Beijing, Shanghai, the Yangtze River Delta, Pearl River Delta, Central China, Jingzhou and the surrounding areas totaling 400 enterprises to establish a school-enterprise cooperation in major oil and Shenzhen, Dongguan, Jingzhou and other places set up 78 school-enterprise cooperation training base. Sixth, the reform of administrative management, implementation of a long flat management system. College implement a secondary management, key management functions of various functional departments by the College complete, weakening department (ministry) management functions of teaching units, the Department (Department) focuses on teaching management and student management. Each unit is only set up a responsible person, no deputy. Implementation of the flat, after a long system managers significantly reduced, effectively reducing the running costs, reduced internal friction and improve efficiency. Because to see the effectiveness of research and practice of organic combination of theory and practice, "Theory and Practice of Independent Colleges featured" results obtained in 2013 in Hubei province education scientific research award. 2013 College and declared and approved the National Education Science "second five" planning issues "Specialty Construction Theory and Practice of Independent Colleges," while declared and approved eight Hubei Province Education Science "five" planning issues, for theory and Practice of specialty Construction of depth. 2014 and 2015 and the declaration approved 10 Hubei Province Education Science and planning issues, College of the existing teaching and research fund 160 projects, research funds 1342000 yuan, effectively enhancing the teachers' teaching and research capabilities to enhance the education level, to improve the quality of personnel training, and promote the development of the school.

### III. COOPERATION EDUCATIONAL FOUNDATION

Local colleges and universities transformation and development of the important aspect is the integration of production with teaching, cooperative education, schools and businesses to work together to foster application of technical talents. Therefore, cooperation with educational foundation, is to promote the restructuring and development of the necessary conditions.

Yangtze University College of Engineering and Technology was first established, clear thoughts of running the service sector and local efforts to cultivate talents for regional economic and social development. College was established in 2006 school-enterprise cooperation committee, set up a platform for industry-university cooperation, a total of Little Swan (Jingzhou) Electric Co., Ltd. in Jingzhou City, Transmission Machinery Co., Ltd. and other 61 business representatives to join (8). Since then, the school-enterprise cooperation continues expand. In June 2011, Jingzhou development zone was promoted to national economic and technological development zones, in December 2011, Jingzhou became the fifth national demonstration area industries to relocate, 2012 implementation of the development of Jingzhou in Hubei Province, "Zhuang waist project", Jingzhou economic and social development have been fully upgraded, vivacious new atmosphere. The rapid development of Jingzhou for the development of the Yangtze University College of Engineering and Technology has created good opportunities and conditions. College Jingzhou economic and social development to adapt to, vigorously promote school-enterprise cooperation, to build a new pattern of production Relations.

First, cooperation corporate employee training. It has opened a new technology enterprise training, business management cadre training, enterprise employees continuing education, etc., for the joint venture to build a learning organization, to form a full learning, lifelong learning culture, enhance core competitiveness of enterprises to make contribution.

Second, cooperation "Order" Talent. Since 2007, the college opened a successful Hubei Hang Lung Group, the US Jingzhou company, Hua Shiyang Philip Glass Co., Ltd., Ming Fortunately, electronics and other enterprises to cooperate with school-enterprise cooperation in class 15, for the cooperative enterprise "tailored" training in urgent need of professionals. College and Hubei Hang Lung Group, the US Jingzhou companies offer "Hang Lung Machinery Cooperation classes," "America's Cooperation", the two sides jointly develop personnel training programs, joint selection of instructors, jointly guide students practice, achieved good results, the first phase of cooperation in class 49 among 18 people to stay in business, and remain stable, Hang Lung Group is very satisfied. Hang Lung Group in 2011 from more than 20 subsidiaries screening job requirements, from mechanical design and automation, material forming and control engineering, automation, marketing, financial management, and other five professional selection of students to form a new "Hang Lung Group co-classes," in order to facilitate the effective operation of cooperation classes, Hang Lung Group set up special scholarships cooperation, to cooperate students scholarship awarded 2000 yuan per year per student.

Third, cooperation in the construction training base. College and Yangtze River Delta, Pearl River Delta, Central China, Jingzhou and the surrounding areas and other places a total of 400 enterprises to establish a school-enterprise cooperation, agreement business 260, in cooperation with the Jingzhou development zone, to build

a provincial internship training base. Hubei Hang Lung Group, Sanonda, the US refrigerator factory Jingzhou Division, Jingzhou Whales Transmission Machinery Co., Ltd. Jingzhou City Universal Chemical Machinery Co., Ltd. Jingzhou City Huaxiang Chemical Co., Limited Huayi Compressor (Jingzhou) Shares company and other units, build 86 internship training base for the training of students' practical ability to create good conditions, only Jingzhou Economic Development Zone has hosted 3,000 students per year of practice and training, but also for the training of "Double teachers" created condition.

Fourth, cooperation in science and technology research and development. And Jingzhou School of Ka Wah Technology Co., Ltd. jointly established the Institute of Applied Chemistry, Applied Chemistry, product research and development cooperation. Meanwhile, a positive commitment to scientific research projects organized teacher Jingzhou relevant companies, since 2008 assumed the Hang Lung Group (Caravan companies) "worm gear design parameters and meshing effect theory analysis", "automobile steering column natural frequency analysis and testing project" and other research projects; bear Jingzhou four machine Serva oil drilling equipment Limited" TPB-600B horizontal, triplex, single acting reciprocating piston pump five major three-dimensional finite element analysis of components and strength check calculation ", TPB600 3 inch head solved analytically appropriate self-reinforced pressure and finite element analysis and calculation of the stress, fatigue life than self-reinforced around "and other topics; He assumed the Jingzhou City Lake Machinery Plant military projects "XXX radar antenna structural analysis" three research projects; in 2009 it undertook in the petrochemical fourth Machinery Factory "ZJ30 rig substructure fracture failure research"; 2010 onwards and Mausoleum of Jingzhou Machinery Co., Ltd. jointly launched the "special-purpose machinery manufacturing and assembly process" cooperation projects; and Jingzhou Hoi Fu furniture Co. conducted a series of research cooperation, public security guidance Axle Company, Hubei Valeo automotive Air Conditioning Co., American Standard automotive parts member company, Hubei Jingzhou Development Zone four Diamond petroleum Equipment Co., Ltd., Jingzhou

City Mingde Technology Co., Ltd. in Jingzhou of enterprises technological innovation.

The study showed that Yangtze University of Engineering and Technology with the restructuring and development of the basic preconditions for schools to further serve regional economic and social development, service industries and enterprises and technological progress, the ability to enhance the application of technology student services has laid a good foundation.

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