

**Study on the Dilemma and Countermeasures of the Transformation of  
China's Local Undergraduate colleges and Universities to Applied  
Technology Universities**

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*Abstract: With the continuous improvement of the society and economy of our country and the accelerating of industrialization process, it is imperative to develop and build a number of applied technical universities. Through the analysis of the dilemma from the thoughts and theories, university-running model, management system, faculties, professional construction, and curriculum content of the transformation of local undergraduate colleges and universities, the article proposes some suggestions on the transformation of local undergraduate colleges and universities in China.*

*Keywords: local undergraduate colleges and universities; transformation; Applied Technology universities; Dilemma and Countermeasures.*

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## **1. INTRODUCTION**

Perfecting the modern vocational education system and developing applied undergraduate education are the hopes for the transformation of local undergraduate colleges and universities in recent years. At present, in China, it is higher vocational colleges that have mainly cultivated and outputted the applied technology talents whose social recognition is not very high. Generally, the students have problems of weak theoretical bases and poor technical masteries that can't meet the requirements of society for advanced technical and technical talents. Without solving those problems, to develop the modern vocational education system will become an empty talk.

Since the Ministry of Education made the transformation guidance in 2014, the government began to actively deploy strategies plans. At the executive meeting of the State Council, Premier Li Keqiang pointed out, "our country should guide some undergraduate colleges and universities to transformate to applied technology universities." The Ministry of Education also said that more than 600 local undergraduate colleges and universities, which were built after 1999, will be transformed into applied technology universities. So through a series of development strategies, we can see that the transformation has become a general trend. Some scholars believe that "transformation of local undergraduate colleges and universities is not

only an inevitable outcome of external environmental influences, but also an internal driving force for its own development.” [1] Accelerating the transformation of local undergraduate colleges and universities can promote the country's industrialization process and make up for the shortage of high-end technical skill talents. The transformation of local undergraduate colleges and universities has gradually become a discussion and research hotspot in education circles. The goals of the transformation of the local undergraduate colleges and universities are truly understanding the issues arising in the process of transformation that can be turned into boosters, and at the same time retaining the original characteristics as well as professional characteristics of every university to successfully explore a distinctive transformation route and cultivate the needed talents for the society.

## **2. ANALYSIS OF THE DILEMMA IN TRANSFORMATION OF LOCAL UNDERGRADUATE COLLEGES AND UNIVERSITIES IN CHINA**

At present, a series of china's policy show that the transformation of local undergraduate colleges and universities is a long-term and arduous task. Under such circumstances, many undergraduate colleges and universities still hold the attitude of hesitation and wait-and-see attitude. Only a few universities strongly hope to join in the reformation pilot team. In the process of transformation, some universities have even encountered opposition from students and even the society in the process of transformation. These problems are barriers on the road of transformation.

(1)The traditional academic education idea is deeply rooted, and the theory on university management needs to be updated

Just as the so-called thinking can determine the direction of people's actions, the concept of Transformation greatly affects the efficiency of transformation of local undergraduate colleges and universities. In our country, the attitude to application technology education is nation emphasizing but society discriminating. [2] Which traditional academic education has a deep-rooted influence on people's thinking makes reversing the thought and changing the concept be the most crucial. Many local undergraduate colleges and universities have blindly pursued comprehensive, academic and research-oriented education in the orientation of running university in the early time of building college or university. They have continuously expanded their enrollment, the scale of running college or university and focus too much on traditional subjects ,so that they neglected the characteristics of local economic development, local talents, and they can't meet the need of local industry. All of that caused that they haven't formed their own university characteristics and professional features. In the practice of cultivating students, the universities having not been able to properly link professional courses with local industrial structures, lack of professional concepts cause faults within the professional knowledge and professional requirements which makes students be lack of practical and applied abilities. The thinking way of teachers and managers is fixed that is difficult to jump out from the original thinking of running colleges and universities. Although China has introduced many policies to support and require transformation, many colleges and

universities are still hesitant without clear understanding of ideological concepts. Therefore, there will be many problems in the process of transformation.

(2) The model of running universities is single, the diversified governance is defective.

Many local undergraduate colleges and universities blindly pursue the “high-level” university-running model, which leads those colleges and universities to be similar without their own characteristics. Due to the characteristics of applied technology are professionalism and application, it requires the economic stakeholders, such as universities, enterprises and institutes, should participate in and govern together to change the transformation from one-element governance running model to multi-governance running model. However, in the market economy, the cooperation between enterprises and universities with different interest orientations where the enterprises are more for the promotion of public welfare instead of really implement the cultivation of students, which has led to multi-governance running model cannot penetrate.

(3) Single Management System is Lack of university-running Autonomy

Due to the government playing the leading role in the higher education system, the local undergraduate colleges and universities were operated in accordance with the “two-level management and local co-ordination” management system at the time of being first established which resulted in the closed development of local undergraduate colleges and universities. Under that single-mode management system, many teachers’ management authority to university have been limited and lack of the joint governance with related companies, scientific research institutions and other economic stakeholders. That relatively closed management system has made it difficult for local undergraduate colleges and universities to provide services for the development of the local economy, and has not been able to build a cooperated and diversity management mechanism with enterprises and research institutes. There is a shortage of “double-certificated” teachers, and the construction of teaching staff needs to be improved. In recent years, with the requirements of the Ministry of Education for the construction of university teaching staff, many universities have begun to respond positively and implement talent introduction strategies to attract talents. However, in that process, most of the new teachers of the local undergraduate universities are fresh graduates and in-service teachers, rarely coming from enterprises and research institutions, so the proportion of enterprise technical talents is still very small, which causes the overall practical ability of the teachers in colleges and universities is insufficient. At present, the local undergraduate colleges and universities in China are all recruiting highly-educated academic teachers, which tends to makes it easy for the teaching orientation to be biased towards the “attach importance to practice but neglect theory”. From the perspective of system, the local undergraduate colleges and universities have little strength in the training of the teachers participating in business practices and cannot match the construction orientation of the “double-certificated” teacher team. In addition, many people with professional qualification and industry background are not willing to enter the university to work. Due to the inadequate treatment,

local undergraduate colleges and universities are not able to attract such practical and applied talents.

(4)Unclear development position and blind professional setting

Although the transformation of local undergraduate colleges and universities in our country is targeted at applied Technology universities, many schools still follow the traditional model of cultivating academic and research talents. Most of the local undergraduate colleges and universities are upgraded from junior colleges whose major settings are blindly following the trend and seriously out of line with the development of local industries. [3] The universities has made some changes in the application curriculum, but there are still many problems in the actual class. For example, in order to pursue a comprehensive profession setting, all those universities want to strive to cover all majors and disciplines, leading to a high similarity profession setting among universities, which can not highlight every university's own advantage, obscure training target, and seriously hinder the good development of the transition.

(5) The course content is traditional and lack of practical application

The word “application” is the key to distinguish traditional undergraduate education who focuses on the input of knowledge from applied undergraduate education who pays more attention to the input of the ability . Local undergraduate colleges and universities transformation needs to re-set and plan on the content of the curriculum, reflecting the unique talent training program, forming a development path of their own characteristics. In the process of transformation, many school curriculum development goals are not clear, with the adjustment of course content being still lack of features, the application curriculum not reflecting the "application", whose class schedule is less. The actual training and experimental facilities in the universities have been built, but they are not available to students. Many courses contain practical training content, but the school does not make good use of the training site, and even some practical training site s become decoration, restricting the development of practical courses. As a result, many colleges and universities have made adjustments in the course content, but they have not played a role in the teaching, which is only an empty talk.

### **3. SUGGESTIONS FOR THE TRANSFORMATION OF LOCAL UNDERGRADUATE COLLEGES AND UNIVERSITIES IN CHINA**

Since the 18th national congress of the communist party of China (CPC) in 2012, it has always stressed that we must adhere to the path of independent innovation with Chinese characteristics and implement innovation-driven development strategies, which has provided strong strategic support to provide comprehensive national strength. Along with the accelerating of the transformation and upgrading of industrial structure, innovative industries have mushroomed, such as artificial intelligence, big data and cloud computing, all that have great demand for high-tech talents. Therefore, according to this phenomenon, China proposes to focus on undergraduate professional education to guide some local undergraduate colleges and universities to tranformate to applied technology universities, and strive to cultivate a group of innovative high-tech talents. In fact, many local undergraduate colleges and universities have

not really implemented their internal construction problems in the process of transformation. They always want to be provided and supported from the outside, which leads to the transformation can't be substantially improved. In the transformation of local undergraduate universities and colleges, it is necessary to clarify the direction of the path to form a co-construction mechanism for the adjustment of disciplines with local industry enterprises, and improve the sharing mechanism for the upgrading of the teaching staff to promote the co-management mechanism for the reformation of the training model. [4] we should always make internal construction as the primary development content and clear the direction of transformation.

(1) Make clear the concept of universities transforming

The transformation of local undergraduate colleges and universities who should pinpoint their own directions and own university-running orientations, must be adapt to local economic development and provide the corresponding talents for the transformation of the social industry structure to implement talent match. The transformation of local undergraduate colleges and universities should have advanced educational philosophy and pursuit. Firstly, those universities should keep abreast of the development of the times and change running-university ideas with the changes of social and economic development. In addition, being necessary to establish every university own characteristics, only to highlight its unique characteristics, can many colleges and universities achieve sustainable development. Finally, with keeping pace with the times, they should be good at finding the development trend of local economy and industrial structure to make adjustments and jointly promote the development and progress of education.

(2) Realize the transformation of diversified universities-running mode.

The multivariate universities-running mode is to change the traditional universities-running mode that let university, enterprise and institute become the subjects of running-university to create a more open running mode. Promoting multi-running mode transformation can strengthen the cooperation among universities, such as organizing universities union, sharing resource, actively participating in teaching practice discussion, trying deeper joint training mode and so on, to form an interactive force. In addition, university-enterprise cooperation can also be used to promote the transformation of the multiplex university-running mode which is one important indicator in the development of application technology university. Only to form common interests chain with such as local enterprises and institutions and become integration, can they achieve successful transformation.

(3) Promote the transformation of management system and mechanism.

The transformation of the management system and mechanism is the precondition for the successful operation of local undergraduate colleges and universities, and the functional institutions of the universities should be equipped with corresponding operating system with the transformation and development. The transformation work is a systematic project, which requires some personnel in the university to specialize in making transformation recognition to guide the work of transformation and strengthen the reasonable induction of the whole

school. Therefore, it is necessary to reasonably allocate personnel and the corresponding functional agencies to conduct spiritual guidance through the profit-driven methods and promote the participation of people in the transformation. Changing management concepts and promoting management mechanisms require a series of system reforms. The transformation management idea, promote the management mechanism, need to speed up a series of system reform. First of all, we should publicize the interactive practice mechanism and strengthen the enthusiasm of school-enterprise cooperation. Secondly, the implementation of the reform of the college system must be implemented to highlight the self-dominance of colleges at all levels and play a major role. Furthermore, an effective academic performance evaluation mechanism should be established to enable teachers to actively participate in school-enterprise cooperation to train and learn university management and lead students to progress. Finally, it is necessary to adjust the teacher distribution mechanism and post settings to carry out the training of school-enterprise posts, classify and manage teacher resources, and mobilize the enthusiasm of the staff of the school and enterprise.

(4) Strengthen the transformation of the construction of teachers' teams.

The pivot in the transformation and development of local undergraduate colleges and universities is always teachers. Applied undergraduate education needs the teachers, who not only have a certain subject knowledge, but also can be transformed into having industrial action, should understand local industry economy and local industry enterprises demand. "Double-qualified" teachers are the basic requirements for teachers in higher vocational colleges. Such teachers not only can serve as teaching work in universities, but also have their own work experience and work ability. The teachers who have the qualifications of teachers and professional qualifications at the same time are needed for the transformation in colleges and universities. Many colleges and universities employ some high-tech talents, but due to the lack of teaching experience, the transformation of identity makes it impossible to enter the role well, resulting in less than ideal results. To build a group of high-quality and high-level "Double-qualified" teachers, the universities and colleges must change the original concepts that only pay attention to the development of theoretical teachers, and turn our goals into the cultivation of both academic and practical abilities of teachers. As for the cultivation of the application-oriented college teachers, teachers should not only go out but also let teachers come in. [5] To change the structure of the teaching staff, it is possible to hire key experts from local industry companies as part-time teachers to guide students to solve the problems in the actual situation they may encounter and to provide typical practical work cases. Some experienced teachers can also be choose to send to visit major companies, scientific research institutions, and well-known applied technical universities at home and abroad to improve their own practice and creativity and learn valuable experience, and gradually build up a group of highly qualified "Double-qualified" teacher in constant learning.

(5) Pay attention to the transformation of disciplines

The construction of the local undergraduate colleges and universities is essentially to develop the local economy and contribute to local demand. Therefore, the construction of disciplines

should keep a close touch with local industry enterprises and pay close attention to local demand to carry forward the tradition of their own advantages with combining with local economic industry development. For example, the Fujian University of Technology has been inheriting the advantages of “big mechanical and electrical engineering, large civil engineering”, and is known as the “Whampoa Military Academy of Construction” in Fujian, and “the cradle of mechanical and electrical engineers.” It is one of the first governing units of Applied Technology University (College) who always adheres to the orientation of “employment-based, regional, teaching-oriented, application-oriented” and build majors according to local economic requirements. The transformation not only needs to be linked with local characteristic industries and advantageous industries, but also combines the outstanding traditions inherited and the characteristics of the current situation to run out of their own characteristics. It must be done to match the disciplines of the university with the needs of local talents post demand to do real supply.

(6) Focus on the transformation of application curriculum content.

The curriculum content should be set on the basis of personnel training objectives, and the transformation of local undergraduate universities and colleges is to train the talents of the society. Only by putting the curriculum system structure above the actual needs of the society, can we truly work out a more close to the real society and Applied curriculum content. The application curriculum structure can be combined with the example learning process of the practical work, with the work process being designed into the syllabus, the specific context of the work being join in the practice course, which can make students really understand the actual work. That new type Course programs have already appeared in German vocational education courses and are widely used. The key of cultivating engineering talents lies in the curriculum, and the construction of the curriculum system will enable the applied undergraduate colleges and universities to step out of the development path with connotation in the future. At present, the main body of curriculum construction in most local undergraduate colleges and universities is still school professional teachers. Quite a number of teachers are accustomed to the academic system teaching model, and they are unable to cope with the development trend under the new situation. Therefore, it is necessary to strengthen exchanges and cooperation with local enterprises with establishing a curriculum development committee composed of members of both sides to optimize the structure of the curriculum and cultivate engineering-technical talents for economic needs. [6]

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