

# University Orientation and Developing Planning Studies on the Case of Yanshan University

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**Abstract:** Scientific developing concept of higher education is overall, coordinated and sustained based on facts. The developing planning of a university which is the perspective of an university must be unified, directed and completed scientifically. Take Yanshan University for example, during its 11th Five-Year-Plan period, we hold the opinion that university orientation is a norm of formulating the university developing planning. Meanwhile, scientific developing plan is the prerequisite to implementing scientific developing concept of higher education.

**Key words:** university; orientation; develop; planning

## 1. University Orientation

### 1.1 The Conception of University Orientation

The orientation of a university should be considered at three aspects, namely higher education orientation in the whole social system, university orientation in the whole higher education system and essential internal factors in the growth of a university.<sup>1</sup> This article attempts to explore the relationship between university orientation and developing planning on the basis of studies on one university. Hence the article only analyzes the latter two aspects.

Every university exists as a subsystem in higher education system. The subsystem is independent as well as related to the whole system so that the subsystems inevitably cooperate and compete in information, energy, and resources. Every subsystem possesses different information, energy, and resources because of different history, condition and status. Every subsystem is also objectively in a certain energy level for its different functions in the whole system. In other words, each university certainly has its own position which is objective and will not change or influence for man's willingness. The article raises the idea that nowadays, universities need to settle the problem of orientation in five aspects which include function orientation, level and type orientation, discipline orientation, scale orientation and characteristics orientation.

### 1.2 Function Orientation

University functions are the functions of higher education system performed when the university is regarded as a subsystem of social system. In the history of modern universities, their functions experienced a process of keeping developing and improving since the foundation of the first university Bologna University, the initial universities including Paris University and Oxford University only possessed the function of teaching. Humboldt founded and formed and put forward the principle of combining teaching and researching so as to expand the functions of the university in the early 19th's. Before long, University of Wisconsin in America furthered

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<sup>1</sup> Xianjun Liu. (2003). *On University Orientation*. Research on Higher Education, (1)

university functions growing by and practiced the principle of serving society. It is generally acknowledged as three main functions for the university to cultivate, research and serve society. Each university always possesses different functions for its different history, subject and object conditions even if the functions are similar but their levels and characteristics vary. Therefore, there are differences among the universities orientation. Only by identifying the differences exactly can the orientation be exact.

Yanshan University has a history of 85 years. It began to cultivate graduates in 1960s and has advantages in the field of whole-set heavy machinery and equipment in China. Machinery design and theory is the national key subject and the fund of research is nearly ¥100,000,000 every year. In 2003, Yanshan University Science Park was founded. Thus, Yanshan University has three functions of cultivating, researching and serving society. Each subject has different history and effects so that it has different functions. For example, subjects of science, economics and administration are still weak in serving society. Only engineering possesses three functions. The above are the basic analyses on function orientation of internal system of Yanshan University.

### **1.3 Level and Type Orientation**

Level and type of a university are two conceptions which are different and relating with each other. Level here points to different level of cultivating, for example, cultivating students for doctoral degree, master degree, bachelor degree and professional training. Type here means the type of a university such as the type of research, type of teaching and research, type of teaching and types of applied technology. The type of research refers to the universities that give priority to cultivating graduates or graduates which hold large proportion. Type of teaching and researching gives priority to cultivating bachelors and graduates which hold certain proportion. The university that only cultivates bachelors and there are not any or few graduates should be categorized into the type of teaching. Training schools fall into the type of applied technology. Yanshan University cultivates doctors, masters and bachelors. There are 15,000 bachelors as well as 2,000 graduates who hold 10%. Yanshan University is positioned as the type of teaching and researching.

### **1.4 Discipline Orientation**

The discipline of higher education can be divided into 12 categories, namely science, engineering, agronomy, medicine, art, historiography, philosophy, administration, law, education and military. The university that only cultivates in one subject is called the college of mono-subject such as engineering college or medical college. The university having multi-subjects cultivates qualified person in two or more subjects. Universities that cultivate qualified person in three or more subjects including science and achieves high level are comprehensive university. There are some differences between multi-subjects university and comprehensive university. They differ in the level of the subjects. The level of the subjects in a multi-subjects university is unbalanced. Contrastively, the level of the subjects in a comprehensive university balances especially the level of science is high. Yanshan University can be oriented as a multi-subjects university. If the orientation changes to comprehensive university, the weak subjects will need more support.

### **1.5 Scale Orientation**

Scale of a university means the quantity of the students in the university. Scale of a university determines the resources of running the university, and resources restrict the scale of a university on the contrary. Neither larger scale nor smaller scale is better. Scale of a university should be suitable. What scale is suitable? Scale orientation should be subordinated to the type and discipline orientation. Scale of a university of researching type should not be too large because this type of universities give priority to cultivating higher-class qualified persons such as

Harvard University and Massachusetts Institute of Technology in which students are about 15,000 and the proportion of bachelors and graduates are almost equal to high educational fund per student. In addition, scale of a multi-subject university and a comprehensive university are larger than that of a mono-subject college because if the quantity of students in one subject is equal, more subjects mean more students. Generally speaking, scale of a comprehensive university or a multi-subjects university should be 10,000 to 20,000 students with accordance to the law of scale benefit. Tsing Hua University and Peking University with the scale of about 20,000 students make effort to be first-class university in the world. The proportion of bachelors to graduates in the two universities is 1:1. California Institute of Technology is a multi-subjects university with small scale and high level is also a first-class university in the world in which there are about 2,000 students and the proportion of graduates to bachelors is 1:1.

The University of the Researching Type should not be in large scale because larger scale will reduce educational resources for each student accordingly and does not obey the law of cultivating the qualified which is different from producing products. In the perspective of educational economics, higher education does not pursue profits. Higher education offer para-public articles which need support from public funds restricted by state finance. Therefore, in the final analysis, scale of a university is restricted by national economic development. Larger scale does not necessarily means more funds. On the contrary, larger scale means less educational resources and lower level of running. In its 11th Five-Year-Plan period, Yanshan University will be ranked in the category of type of teaching and researching with high level with 17,400 bachelors and 6,000 graduates and the proportion of 3:1 of bachelors to graduates by 2010.

### **1.6 Characteristics Orientation**

Characteristics mean advantages. The characteristics of a university refer to the special connotation with contrast to other universities. The characteristics of a university can be demonstrated by the conception and style of running the university, cultivating aim, subjects' level, course system and so on.<sup>2</sup> Distinguished characteristics which are important symbol of the advantages of the university help improve the level of running and make the university outstanding among the counterparts. Every university should hold its own advantage and form its own characteristics no matter how long the history or how high the level. It is a process for a university to identify its own characteristics. The university with longer history always has prominent features. Yanshan University is a multi-subjects university on the basis of its advantages which is heavy machinery and equipment, giving priority to engineering. Therefore, the advantage in the subject of heavy machinery and equipment is the characteristics of Yanshan University which is able to improve itself to be first-class group of subjects in China. Yanshan University has accomplished good interactive organism of combining and promoting to each other within teaching, researching and industry during a long time of running. This organism is also the advantage which is not as distinguished as the former.

## **2. University Developing Planning**

### **2.1 The Conception of University Developing Planning**

University developing planning can also be named the strategy planning of university development. In 1972, two American scholars induced strategy planning into higher education. University Developing Planning is the specific presentation of its developing strategy which is long-term, overall and involves the destiny and future of

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<sup>2</sup> Xianjun Liu. (2003). *On University Orientation*. Research on Higher Education, (1)

the organization. It is a plan of long-term, own principles and macroscopic. Its content includes the guiding ideology, aim, tasks and methods. The long-term plan means 10-20 or more years and the short-term plan means 5 years which are in accordance with the national developing planning. According to the short-term plan, the annual work plan is necessary.

It is the primary duty to formulate developing plan for scientific administration. Its aim is to make the university develop in the direction meeting the requirement of economic and social development on the basis of its own condition. What's more, it also aims to promote the social profits and economic profits. The university makes every endeavor to exist and develop in fierce competition.<sup>3</sup>

How to make a good plan? I believe that the plan should be under the direction and control of scientific development concept, following the basic law of higher education. We should recognize the development of a university is coordinated, overall and sustained in its scale, quality, structure and profits. University orientation is the standard and norm of making plan. Performing scientific developing plan guarantees completing scientific developing conception in higher education.

## 2.2 Guiding Ideology and Aim of Running

Guiding Ideology is a specific representation of running conception. *Higher Education Law* offers the idea and conception of running. At the same time the law grants universities corporate organizations. Consequently, universities are independent and should take initiative to form its own characteristics under the guiding of state law. Different university needs special and original guiding ideology to avoid simply repeating and state policies.

We can not determine the guiding ideology of Yanshan University without the university orientation and actual strength. Yanshan University is an old university with the history of 85 years and the advantages started as the department of Heavy Machinery of Harbin University of Technology. Yanshan University (former Northeast China Institute of Heavy Machinery) was categorized as key institute in 1978. Its successful experience can be summed up as follows:

- (1) Good basis and teachers of Harbin University of Technology.
- (2) Initiative and creative staff that bear hardships and form good tradition.
- (3) Close connection with factories, practice and researching which are principles for cultivating students and training teachers with high-quality outcomes
- (4) Relatively concentrated subjects whose emphasis and strategy are outstanding.

After 20 years reformation, Yanshan University transformed from a mono-subject university to multi-subjects university with larger scale since moved to the coastal city. The connotation of the university has changed a lot. Faced with the challenges of internationalization and popularization of higher education, what will the university perform? There are distinct guiding ideology and aim for "11th Five-Year-Plan". The leaders and staff recognize clearly that the primary contradiction at present or in the near future is to meet the needs of people's desire to make children accept higher education and its contradiction with the insufficient resources. The university will continue to offer focal support to advantageous subjects in order to make them first-class in China so as to keep the advantages. For the new and weak subjects, the university will ensure good teaching level and researching condition and try to cultivate graduates in most subjects. The overall aim is to make Yanshan University be the first-class university of teaching and researching type in China with tremendous strength in engineering especially first-class groups of subjects of heavy machinery and international reputation in coordination in science,

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<sup>3</sup> Keyong Cai. (2003). *Strategy Planning: The Key to University Development*. Communication Higher Education Research, (4)

engineering, art, economics, administration, law and education by 2020. The short-term plan is to make Yanshan University be a multi-subjects university of teaching and researching type in China with tremendous strength in engineering especially first-class subject of heavy machinery and equipment.

### 2.3 Tasks and Measures

Tasks are the works which need to be done before achieving the aim and also the subtarget under the overall target. The university can identify the subject construction target, researching target, cultivating target, teacher training target, scale target, administration target and so on.

Subject Construction Target: by 2010, the national key subjects will have been increased by 2 and provincial key subjects will have been increased by 6, post-doctor work station will have been increased by 1, first-level doctor granting disciplines will have been increased by 3, second-level doctor granting disciplines will have been increased by 17, master granting disciplines will have been increased by 16, MBA degree granting will pass the assessment, 3 excellent doctoral thesis will emerge.

Researching Target: By 2010, the fund for researching will add up to ¥200,000,000, 3000 articles among which there are 300 will be, 150 research projects will be completed, 3 national scientific progress award, 1 national key laboratory, 1 national engineering center, 3 provincial key laboratories.

Teacher Training Target: the proportion of teachers to students will be 1:16, the proportion of teachers with doctoral degree will be 30%, to cultivate and import 10 academic leaders with some international reputation and 30 academic leaders in China and 100 provincial academic leaders and spare leaders. The excellent teachers will be 200. 90% teacher should be the graduates of other universities. By the end of 2010, the professors under 45 will hold 50% and vice-professors under 40 will occupy 2/3.

Measure is the methods and procedure before completing the task and strategy methods of achieving aim. From the history of Yanshan University we should identify not only the advantages but also the disadvantages of having strength in engineering, weak in other subjects and scarce development being prior to resources development. Yanshan University 11th Five-Year-Plan emphasizes on three strategies, namely strategy of focal development, strategy of filling up, strategy of integrating. Strategy of focal development means developing subjects of heavy machinery and equipment and relative subjects. Strategy of filling up means filling the new and weak subjects with educational resources in order to meet the requirement of cultivating graduates. Strategy of integrating means integrating resources. Measures can be guaranteed by strategies.

University orientation is the basis as well as the core of university planning. Precise university orientation needs teachers and students' research and discussion. Making university plan needs theoretical guide as well as practice. Its vigor lies in recognition by teachers and students.

**References:** (omitted)

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