# Study on the Research Universities Development Strategy for Enhancing the Core Competitiveness

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***Abstract*—The essence of university development strategy is to establish competitive advantage. Starting from the definition of core competence, this paper reveals the connotation and constitutional elements of the core competence in Research University, and dissects its characteristics from multiple angles. Based on the dynamic integration of idea, system and technology of knowledge management, the development strategies of research universities from three aspects of vision, discipline construction and management integration were explored.**

***Index Terms*—Core competence / competitiveness, research university, development strategy.**

## I. Introduction

University development strategy, also known as university strategic planning, is an organization's process of defining its development direction and speed, making great choices or plans on allocating its resources and capabilities in a certain period of time. The goal is to solve the problems of the development of universities, to achieve a healthy and sustainable state. Under the circumstance of increasing prominent marketization and internationalization of higher education, the importance of crafting a sound and coherent innovation strategy appears crucial [1]. On the other hand, universities must have a competitive strategic advantage to obtain the sustainable and steady development, and they must establish their own core competitiveness to have this competitive advantage. Accordingly, this article argues that the fundamental goal of university development strategy is to enhance its core competitiveness. Some researchers have delved into the connotation, aspect, characteristic and function of the universities' core competence [2], [3]. Clues to core competence evaluation model and cultivation measures were given [4], [5]. However, by far there is little strategic research on the core competitiveness enhancement in accordance with Research University characteristics.

On the basis of analyzing the researching the domestic and international scholar about the concept of core competition, and proceeding from systematic view, this paper probes into the definition, connotation and constituents of core-competence, discriminates the external and internal influence key factors. In such case, find competitive advantage and development direction of the Research University, which make targeted recommendations that will provide research universities in China a new development thought.

Manuscript received April 11, 2017; revised June 22, 2017. This work was supported by: 1)the Fundamental Research Funds for the Central Universities – "Research on the evaluation and development strategy of core competence of Research University"[grant numbers NR2016038]; 2)the Key Project of Philosophy and Social Science Research in Colleges and Universities in Jiangsu Province –"Research on the evaluation criteria and development strategy of world class university with Chinese characteristics"[grant numbers 2016SJD880001]; 3)Research and Practice on teaching reform of postgraduate education in Jiangsu Province – "Research on the quality control of graduate education from the perspective of core competence evaluation"[grant numbers JGZZ16_008].

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## II. Definition, Connotation and Constituents

The concept of "core competence" (or competency), which refers to a corporation's learned ability to coordinate technologies and production processes across boundaries in the organization, was first proposed by C. K. Prahalad and Gary Hamel in 1990 [6], and subsequently be introduced to many fields besides Economic management, such as Educational domain [7]-[9]. Founded on the previous theoretical studies on the core competence of university and college, combined with the nature of Research University, it can be defined as that: "competence of Research University" is a series of capabilities for harmonized combination of multiple educational resources and skills that distinguish itself in the marketplace under certain circumstances and against specific target. While "core competence of Research University" is a socially recognized core competence system which distinguish from competitor at the same level and enable the school to gain a long-term competitive advantage, constructed on the basis of long-term internal advantages and sufficient external resources, takes kernel discipline as the marking, characteristic culture as the core, and various types of educational resources (human, financial, material and information) complemented one another.

To make more detailed and in-depth decomposition of above definition, core competence of Research University includes four connotations: (a) It is a historical concept. The foundation of the core competence, both internal advantages and sufficient external resources, are formed in a long-term running practice. From this point of view, it is relatively easier for established universities with a good reputation to seize a competitive advantage than emerging ones. (b) It is a comparative concept. The core competitiveness of the university is relative to the others, which is embodied in a comparative advantage. (c) It is a subject nature concept. The development of Research University must depend on the corresponding disciplines. The level of discipline, namely the quantity of original innovation results and major scientific

research projects, the quality of graduate education, research and innovation base and innovation platform construction, etc., is an important symbol to represent the institutional capacity. Therefore, the core competitiveness of the university is mainly reflected in the competitiveness of the discipline. (d) It is a consistent concept. The effect of the core competitiveness is making the research universities distinctly different from the competitors, to obtain long-term competitive advantage, rather than a flash in the pan.

## III. External and Internal Influence Key Factors

The university core competitive power is integrated non-linearly by many kinds of competitive powers, which are capital, academic, organization, culture, external relations. It thus is common function by various factors. To present practical solutions to enhance competitiveness, this is extremely important and helpful to deconstruct the internal and external reasons, lay stress on the main cause, and pay due consideration to secondary cause.

### *A. External Influence Cause*

**Historical accumulation and characteristics.** Each Research University with different history has different development experience and background, any attempt which blocks the extension of history would be impossible and harmful. First of all, historical accumulation of a university is its unique running style or symbolic feature which distinctly different from others. Difference cannot become an advantage unless it's a recognized item, and also the advantage would affect the basic direction of core competence cultivation only when it is unattainable for other universities in a short time. Second, accumulation and characteristics of university changes over time, the development of competition policy must also move with the times, the notions of university should exhibited the characters of historicity, contemporary spirit and personality. Third, education should meet the demands of society and educates, which is the soul of school running characteristics. With the aim of serving the social development, its value rests with the effects on local economic and cultural development whether are steadily augmenting and irreplaceable.

**Resource acquisition.** Resource, the combination of various factors owned or controlled by the university to deliver on strategic aims, is the base of universities' competitiveness. On the one hand, only the resources that match the development strategy are the most valuable. The choice of resources must be carried on from the viewpoint of strategy, and the resource allocation also has to meet the needs of strategic management. On the other hand, the resources are with the characteristics of scarcity. Research universities will always need to adjust strategic orientation base on the existing opportunities, which is determined by the limited resource situation they faced. Effective resource acquisition as an important constraint on the cultivation and development of the core competitiveness of research universities, manifested in the following three aspects: First, the constraints of human resources. Recruiting talent, retaining talent and promoting with unification as well as strategies for themselves to win abundant resources in superexcellent teachers, which has become the decisive force for the survival and development of the research universities. Second, the constraints of financial resources. To seek funds from government is a crucial method, to gain the social donation is the significant platform. Alone with the competition of high education increasingly severe, the issue of the shortage of financial funds is becoming prominent, developing to be a general global problem. Third, the constraints of material and information resources. Especially the information resources, as a vehicle that combines various resources and objects, the mode of which and the academic communication have made various changes with the development of network. Research universities get to form new knowledge via internal knowledge innovation and external knowledge acquisition, and build platform for information sharing and communication among organizations, to form and strengthen the culture power, innovation power which constitute the basic elements of core competence.

**External positioning.** The competitive advantage is essential to orient of the research university within social development, education system and market segmentation. Such as government's subsidizing and accountability-asking, market mechanism and the university rankings, authenticating, subsidizing and policy steering from non-government organization. These emphasize on the categories of the institutes, types of the talents to develop, standards of talent development. The classification of colleges and universities is, first of all, a classification of elite education and mass education. In terms of educational standard, they may be of 4 different levels: world-class, nation-class, regional and district level, general level. From the viewpoint of school subject running mode, they can be also divided into Public universities and private colleges. Based on the Carnegie Classification, to classify as Associate's Colleges, Doctorate-granting Universities, Master's Colleges and Universities, Baccalaureate Colleges, Special Focus Institutions, Tribal Colleges. All these influencing factors constitute together the external environment for the developmental strategies of research universities' competitiveness.

### *B. Internal Influence Cause*

**Self-localization.** The structure and component of higher education are complicate, it is essential for research universities to seek and certain the position of their own on the premise of accurately grasp the market orientations from different aspects. The self-localization of research universities involve or relate to three dimensions or aspects: subject structure (single-subject, multidisciplinary, comprehensive), service orientation, development goals, it to a great extent determines the development targets, strategies and directions of colleges and universities. To establish high level research universities requires scientific programming and cautious action, which should adhere to the principal of "make it or not, it depends", selectively improve its own innovation capacities and educational level. Accordingly, self-localization is the prerequisite for the university to make plans, allocate resources, and even make full use of its

advantages and characteristics. The school-running experiences of many world-class universities have verified that scientific orientation plays a vital catalytic role in university developments.

**The synergy between elemental capabilities and their supporting facilities.** There are many elemental capabilities in the research universities, such as subject capacity, scientific research capacity, teaching capacity, cultural capacity, institutional capacity, etc. These abilities should form a coordinated, interact and collaborative organic system. This requires a coordination mechanism within the university organization, specifically, three aspects: (a) The coordination between knowledge acquisition and capabilities formation. The activities of knowledge acquisition and knowledge innovation of the research university should focus on the ability to form the core competitiveness. (b) The coordination between the elemental capabilities formation and resource utilization. The forming process of elemental capabilities should be introduced an endless supplies of university resources, which would turn into strategic assets for supporting the core competence to play a role, and become a new type of resource to cultivate and strengthen the core competitiveness. (c) The organization coordination of the elemental capabilities. The arrangement of elemental capabilities should not be simply queued, but engender a coupling and multiplication effect with all the components. The synergy between elemental capabilities and their supporting facilities would greatly enhance the value of research universities in the aspects of scientific research, personnel training, social services and international exchanges. The higher the synergy is, the more core competence formed which penetrate into all aspects of campus culture, management model, teamwork and others, the less easily imitated by competitors.

**Sustainable innovative capability.** Innovation is production or adoption, assimilation, and exploitation of a value-added novelty in economic and social spheres; renewal and enlargement of products, services, and markets; development of new methods of production; and establishment of new management systems. It is both a process and an outcome [10]. From the external point of view, the core competitiveness of research universities is influenced by social demands, environmental changes and competitions. From an internal standpoint, repetition and invariance are unable to maintain and create competitive advantage. In complex competitive environment, research universities should not just passively adapt to the environment, but take advantage of various market opportunities to practice innovating continuously to heighten core competitive ability and advantages of sustainable competition. Judging from the past, the core competence of each research university has its own life cycle, which requires emancipating our minds, seeking truth form facts and keeping pace with the times. Not only needs bring forth new ideas in the concept, system and environment, but also in the goals, method and management. To carry out the innovation of courses content, teaching methods and talent training model as well as discipline innovation, technological innovation and cultural innovation. Make reasonable decision, upgrade the core competitiveness in good time, and reduce the risk of competition and uncertainty, to form a lasting vendibility and competitive advantage. First and last, with no innovation, the continuous operation and competition power source of university may gradually exhausted.

## IV. Development Strategy of Research University

There are many possible combinations between missions of Research University, circumstances, resources, capability and objective, strategy and progress of development. To specify the development strategy of Research University is actually to select the most suitable combination. Generally speaking, the university development strategy should include four parts: Vision, Strategic Objectives, Strategic Themes and Strategic Promotion. Vision to indicate the direction of development. Strategic Objectives to determine the speed and quality of development. Strategic Theme to clear the strategic point of development. Strategic Promotion to describe the development capacity. These four parts, which integrate and support with each other, are a complete theoretical entirety for solving development problems of university. A research university development strategy for enhancing the core competitiveness should develop and innovate three types of capabilities from three aspects.

### *A. Goal Leading Mechanism*

By goal oriented, balance medium and long term development and benefit consideration, strengthen and upgrade strategic leadership.

Strategy is multi-objective, composed of Vision and Strategic Objectives. In the process of its formulation, research universities supposed to make overall analysis of its capability and environment, not only to be more conscious of the limits to its own power, but also much more aware of the strengths of potential rivals and the prospect of the social demand. It should be a centralized description based on a scientific self-localization. On one hand, it is necessary to objectively analyze the realistic conditions and foundation of the university, including discipline foundation, current running level, faculty structure, resource, cultural tradition and other school running conditions. On the other hand, it is absolutely essential for research universities to accurately analyze and forecast the requirements and trends of scientific development. Take the real demands and development trend of science and technology as the basis of its own development, strongly hold the educational ideology of serving the local economic construction and social development, to ensure its distinguishing quality to obtain support from the state and society. Altogether, both hands grasp, to enhance the strategic position, vision attraction, vision motivation and strategic foresight, would be the most basic part of capability system to form the core competitiveness.

### *B. Discipline Construction*

Start with key disciplines, condense the characteristics and construct disciplines with a more lasting advantage, foster and promote the ability of discipline construction.

Usually a first-class university must include first-rate

disciplines, while a set of first-rate disciplines bring about a first-class university. Since the competitions among universities are to a great extent based on disciplines, cultivating competitive ability of university discipline has a strategic meaning in the long term as well as an urgent thing today. Therefore, in the formulation process of strategic planning, research universities should condense the characteristics and construct disciplines with a more lasting advantage, which matched perfectly the main requests of sustainable development. There are four aspects worth making in the reservation and the developing direction setting of discipline: first, whether it reflects the characteristic of the university; second, whether it is closely linked with the national and regional economic and social development; third, whether it is the frontier research issue in this subject, which is able to make a major breakthrough and also promote the development of other research directions, further occupy the commanding heights of the subject; fourth, whether it has distinctive characteristics to keep ahead the others, to achieve a state of "I got what others don't, I'm good at what others do, I'm at the forefront of what others do well". With a clear direction, to enhance the ability of discipline construction, research universities have to stress on three aspects capabilities: academic team construction (the ability to attract and cultivate high-level talents, discover capable personnel and make good use of them, and create academic atmosphere); talent training (the ability to attract excellent students, develop and reform curriculum, and raise teaching standards and quality of education); scientific research (the ability to build research base, undertake major national projects, and improve scientific research output).

### C. Management Strategies

Via the managerial control, fully integrate various internal elements, enhance and maintain sustainable development capacity.

A core competitiveness is constructed by organically synthesize and the utilize the essential factor such as university spirit, management skills, technology, knowledge, resource, policy, system, rule, communication, capability, campus culture and so on. Although most single ladder of management can resolve some parts of the development problems, it is difficult to form reliable and stable core competitiveness without forceful management integration. In the strategic planning, the design of reforming the internal management system, personnel system, and logistics socialization reform are all belong to the scope of internal integration. The core of internal management system reform is to balance the relationship between scholastic, administrative and educational market strength, which should respectively display a leading, limited and assistance function. Reforming the personnel system is complicated system engineering, which concentrates on being the appointment system and reform of the distribution system. The appointment of professional and technical positions should be based of the quantitative evaluation, academic contribution as the segmentation standard. And in the reform of the internal distribution system must take full account of the needs and development of teachers in order to achieve effective motivation. With regard to the socialized reform of logistics, the operational efficiency, support capacity and service quality are the key factors. All these reform and innovation should focus on the long-term goal, and through the adjustment of the relationship between the various elements, to promote sustainable leadership (synergic, ordered and sustainable internal system), System innovation capability (culture creativity, administrative creativity, el at.) and harmonious development ability (society, faculty and alumni satisfaction), a more reasonable and effective internal resource allocation and more smooth and efficient internal operation would be fulfilled.

## V. Conclusion

Ideally, strategic capability should be a balance of the above capabilities, some of them can be duplicated or transferred, yet some cannot. By means of the succession and transformation of development vision, the concentration and innovation of the orientation in subjects and science research, and the reform and consummation of management system, thereby establishing the safeguard in capabilities for their developing competitiveness.

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