A Study on the Reform and the Design of Colleges Teaching Management System Based on Innovative Personnel Training

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Abstract

College teaching management plays a core supporting role in the process of carrying out educational and teaching activities and achieving personnel trainings. This paper analyzes the existing problems in the current situation of college administration from the perspective of innovative personnel training and studies the innovation principles of the college teaching management system from the perspective of management system reform. Furthermore, a reform path of college teaching management system based on innovative personnel training is proposed from three aspects including the innovation of the teaching management system, the optimization of the teaching management functions and the improvement of the quality of management personnel. Besides, the specific practice approaches are discussed in light of the principles of coordinating the relationship between individuals and organizations and clarifying the teaching management functions. On this basis, this paper realizes the research purpose of promoting the development of college education from the perspective of college teaching management system reform.

Key words: Innovative Personnel Training, College Teaching Management, System Research.

1. RESEARCH BACKGROUND

1.1 Literature Review

Currently, China’s economic construction enters a new era, higher education is facing a new form of innovation and development under the macro background. Colleges and universities have been carried out up-dated reforms concerning campus management system, discipline teaching philosophy and discipline teaching strategy. An effective operation of college teaching management is the basic prerequisite to realize the strategy of talent cultivation and teaching activities in colleges and universities (Ou, 2009). Only through the optimization and the innovation of college teaching management, can the overall quality of education and teaching be fundamentally enhanced. As colleges and universities adjust and transform their management guidance, teaching concept and the direction of personnel training, accordingly, the innovative personnel trainings of the college teaching administration staff have also changed (Chai, 2011). This crucial stage of educational development serves as a link between past and future. It is of great significance for college teaching management personnel to have an accurate positioning of their duties and mission and understand the innovative personnel training in the development of education cause, which not only is directly related to the operation efficiency of college teaching management, but also exerts a substantial influence on the effectiveness of college personnel training. College teaching management operates with a scientific management system, and each functional department has its independent functional scope and corresponding independent responsibility. In the operating course of the college teaching management system, each functional departments needs to not only complete their own functional tasks, but also support other functional departments, thereby achieving the management efficiency of the overall systematic operation (Cai, 2007). The ambiguous innovative personnel training of the teaching administration staff further leads to a series of teaching management problems. The existence of teaching management problem in colleges and universities not only brings a great internal limit to college teaching management, but also indirectly influences the development of teaching activities and the improvement of teaching quality.

1.2 Research Objective

At present, the teaching management personnel in colleges and universities have a general lack of sense of responsibility and sense of professionalism, which makes the system and task of teaching management in
colleges and universities difficult to achieve efficient practice. In fact, the personal career accomplishment of teaching management personnel is the external manifestation of the cultivation of individual innovative talents. Teaching management personnel should have a fundamental understanding of their own innovative personnel trainings and a clear grasp of the relationship between individuals and college teaching management, so as to pinpoint their own responsibilities and obligations. The ambiguous innovative personnel training of the teaching management personnel leads to a series of teaching management problems. An effective completion of the duties and obligations of the teaching management personnel within their work scope is the essential element to guarantee the working efficiency of college teaching management. Fundamentally, teaching management work refers to that teaching management personnel fulfill their responsibilities for the development of the education cause. A sense of responsibility and commitment of teaching management personnel is the most essential factor to the effective implementation of the task. Meanwhile, if the functional departments of the school could not make a favorable coordination between obligations and work, the overall efficiency of the teaching management system would suffer a serious and negative impact. In the current teaching management of colleges and universities, it is difficult to achieve the overall coordination because various functional departments have paid an excessive emphasis on their own interests (Wang, 2014), which brings about an extremely negative impact on the teaching management system. It is not only an issue of job authority, but an reflection of the lack of an overall consciousness of college teaching management as well as collective cooperation awareness. By virtue of a clear understanding of the problems in the college teaching management and the action of appropriate countermeasures, the reform of college management system can be carried out.

2. Innovation Principles of the College Teaching Management System Based on Personnel Training

2.1 Coordinate the Relationship Between Individuals and Organizations

College teaching management is the basic work for colleges and universities to launch the education career, which is directly related to the efficiency and the quality of education and teaching and personnel training. To this end, from the perspective of the overall operation of colleges and universities, the significance of teaching management is not only teaching management itself, but the foundation of the whole cause of education. Therefore, college teaching management staff should clearly understand the importance of personal teaching management and enhance the collective concept and the organizational awareness. Only when the teaching administration staff recognize the relationship between individuals and institutions, cultivate the innovative talents as part of the institution and treat the institution as an organic whole (Huang, 2005), can teaching administration staff really understand what they should do and what to do. This is the fundamental of training the qualities of teaching management personnel, but also the basic principle by which teaching administration staff play their personal role and realize their personal values. Therefore, in the process of innovative development of teaching management in colleges and universities, it is necessary to cultivate the collective concept and the organizational consciousness of teaching management personnel, thereby establishing the professional accomplishment of teaching management staff. What’s more, colleges and universities will be divided into a number of colleges and they are managed according to the collegiate system. Management work is assigned to the persons in charge in various departments. Different departments and individuals are responsible for different aspects of management, but meanwhile all the management links will form a complete system. The organization of the college is illustrated in Figure 1.

![Figure 1. Organizational Chart of College](image-url)
The implementation of a two-level management system comprising colleges and schools is conducive to further determine the management responsibilities, to achieve the downward move of management focus, to organically combine management and employment in the colleges and universities, and to strengthen the school-running characteristics. Moreover, a sense of competition is formed between the down-shift of the management center and the students and a positive and healthy atmosphere of competition takes shape in the whole campus, which stimulates teachers’ teaching enthusiasm and administration personnel’s management enthusiasm and sequentially improves students’ enthusiasm for learning.

2.2 Determine Teaching Management Functions

College teaching management is the key foundation for the effective development of college education and teaching activities. Only when the teaching administrative staff maximize their own abilities and realize the idealization of job responsibility and obligation, can the overall college education development strategy and personnel training strategy be effectively achieved (Dong, 2012). The success of personnel training is the practical accumulation of the working effectiveness of teaching management. Teaching managers must recognize the significance of their work effectiveness in the overall deployment of college education, so they are able to truly solve the problem, to make use of their own abilities in the specific work, and to directly or indirectly promote the enhancement of the efficiency of teaching and learning activities in colleges and universities. This is the accurate positioning of the self-value of college teaching administration staff and the value of their work as well as the innovative personnel training in the development of college education cause. Hence, in the innovative development of college teaching management, it is necessary to make the teaching administration staff pinpoint the relationship between their functional responsibility and educational mission (Liu and Qu, 2012), which further maximizes the positive role played by teaching management and lays a solid foundation for education and teaching activities. Teaching management system takes the improvement of teaching quality as the core, applies the cultivation of high-quality talents as the objective, and reasonably organizes each link of the teaching process as well as the activities and functions of each department. Mutual relation, coordination and promotion among various systems develop into an entirety with clear and organic tasks, responsibilities and limits of authority. The teaching management in schools refer to multilateral activities participated by teachers, students and teaching administration staff (Gong, 2016). Therefore, in the process of teaching management, the coordination function of the system should be given full play so that the three parties can effectively cooperate with each other, timely understand the teaching effects of teachers, feedback the information of students’ learning quality, put forward new management objectives, and make teaching and management always operate and progress in a new starting point and at a high level. The structure of teaching management is demonstrated in Figure 2.

2.3 A REFORM PATH OF COLLEGE TEACHING MANAGEMENT SYSTEM BASED ON INNOVATIVE PERSONNEL TRAINING

3.1 Innovate the Teaching Management System

College teaching management system employs the concept of college teaching management and the development strategy of college education cause as the guidance and comprises of a number of teaching management functional departments to realize an operation system oriented by college personnel.
training objective. The operation efficiency of the teaching management system determines the implementation effect of the college education strategy and the realization of the personnel training objective. The operation of teaching management system is the basic guarantee for the college education cause to fulfill its educational objectives. In the new form of the development of higher education, the college teaching management system should first be accurately positioned (Liu and Ren, 2014). The concept of the development of higher education cause and the concept of teaching management are integrated, and college personnel training orientation in the new era and college teaching management are matched. In this way, the overall operation mode and strategy of college teaching management system are further constructed to serve the direction of talent cultivation in colleges and universities and to give play to the maximum value of the college teaching management system in the new period (Li, 2014).

The traditional teaching management system of colleges and universities simply focuses on the aspects of innovative personnel training and teaching management, which makes it difficult to realize the support function of education and teaching activities in the practical process of teaching management system and even restricts the development of education and teaching activities. Colleges and universities should give full consideration to students’ decision-making and allow students to choose different majors and different teachers, so that students are guaranteed to learn the majors they are interested and excel, to learn from teachers that suit them, and to better achieve student’ learning goals (Qu and Liu, 2011). On the other hand, students need to be responsible for their own choices. Factors, such as the time spent in the selection process and the efforts, are considered. When the choices of students are safeguarded, teaching management tools are innovated at the same time to ensure an effective teaching system. It is assumed that students form a combination of costs and benefits in the selection process to achieve the best learning outcomes for decision-making objectives. So the decision equation selected by Student a can be expressed as follows:

\[
\text{max} {U_x}(d_a e_a f) \\
\text{s.t}(1 + g_a)A^e_a e_a = h_x - m \quad (1)
\]

In the utility function \(U_x, d_a, e_a\) and \(f\) respectively represent that the major Student x chooses to like or excel and knowledge and ability acquired by Teacher a. \(A^e_a\) is the tuition fees paid by students before school, \(g_a\) is the conversion factor. The left of the equation indicates the total expenses that a student pays for Major a in the teaching environment of innovative management. \(h_x\) is the gained benefits. \(m\) represents other benefits. In the end, the function is assumed to hold the characteristics of a utility function (Zhang, 2013).

\[
\text{So}, \quad \frac{\partial U_x}{\partial d} > 0, \quad \frac{\partial^2 U_x}{\partial d^2} < 0, \quad \frac{\partial U_x}{\partial e_a} > 0, \quad \frac{\partial^2 U_x}{\partial e_a^2} < 0, \quad \frac{\partial U_x}{\partial h_x} > 0, \quad \frac{\partial^2 U_x}{\partial h_x^2} < 0 
\]

Students maximize their utility by weighing and choosing the appropriate combination of \((1 + g_a)A^e_a\) and \((d_a, e_a)\). The indirect utility function is \(K_x(d_a, P_a, h_x) = U_x(q_a, e_a (A_a, h_x), h_x - A_a e_a (A_a, h_x))\) when Major a is clearly the optimal choice for Student x.

So, \(K_x(d_a, A_a, h_x) > K_x(d_{a+1}, A_{a+1}, h_x); K_{x+1}(d_a, A_a, h_{x+1}) > K_{x+1}(d_{a+1}, A_{a+1}, h_{x+1})\). If each student chooses to a major that suits him or her, there is no chance of increasing effectiveness by selection, so

\[
\frac{\partial K_x(d_a, e_a, h)}{\partial d} \left|_{n A_a} \right. = -\frac{\lambda K_x(d_a, e_a, h)}{\lambda d_a}
\]

It is indicated that, when a student’s acquired ability just is able to offset the cost allowance, the student’s effectiveness is maximized.

3.2 Optimize the Teaching Management Functions

After the construction of the college teaching management system, each specific administrative functional department and each teaching management position in the teaching management system all locate their own positioning. The role of traditional teaching management function simply focuses on the needs of their own jobs, which neglects not only the needs of the entire teaching management system, but also the needs of education development and educational teaching activities for teaching management (Yin, 2013). Thus, the optimization
of teaching management functions—examines their work significance from the perspective of the fundamental innovation of personnel training. Colleges and universities can allocate corresponding management tasks according to the qualifications of managers, so that the management direction of the administration staff is proportional to education background. This approach is more equitable and the academic qualifications of college educational staff are similar, as indicated in Figure 3.

![Figure 3: Educational Personnel Structure Chart](image)

The functional department of teaching management and the specific functional positions of teaching management are re-examined from the overall perspective. The level of their duties and obligations is elevated, and they are connected with the overall development of colleges and universities and personnel training objectives. In this way, as far as college teaching management is concerned, teaching management concepts can be implemented in the specific practice; a meaningful and effective role is played; education and teaching activities are effectively promoted.

### 3.3 Improve the Quality of Management Personnel

When college teaching management system and the duties and responsibilities of each specific function of teaching management are clearly identified, only through the practical implementation of teaching management staff, can they eventually be transformed into practical results. First of all, the teaching management personnel in colleges and universities should receive a certain degree of training so that the teaching management personnel can realize the development direction and the strategy of the college education cause under the new period, further cultivate the overall view and the organization perspective of teaching management personnel, and help the teaching management personnel identify their own responsibilities and obligations (Xu, 2016). In addition, in view of teaching management, the division of authorities and responsibilities should be more clear and accurate, and an appropriate reward and punishment system should be constructed. As a result, the teaching and management personnel can accurately grasp their responsibility and mission in the practical work. In the case of teachers, due to the differences in teachers’ own conditions and other aspects, in order to make students acquire certain professional abilities, different efforts are required from different teachers. When a teacher receives more compensation than effort costs, a profit would occur, and a loss will incur vice versa. In light of the established teaching objectives, the pursuit of maximizing returns is the basis for decision making of teachers’ behaviors (Zhang and Yang, 2010). It is assumed that the reward of teachers come from students’ payment, and the quality of teachers’ teaching service is directly related to teachers’ salary, so

\[ L_a = A^w_a h_a + g \quad A^v_a h_a. \]

The costs of teachers’ teaching activities are \( O(d,v,x,z) \). First, teachers must possess certain knowledge and skills. The higher the level of teachers is, the greater the benefits gained by teachers are. Therefore, \( \frac{\partial L}{\partial d}, \frac{\partial^2 L}{\partial d^2} > 0 \). Meanwhile, apart from improving the ability, teachers’ own efforts will also affect teaching costs and benefits, that is, \( \frac{\partial L}{\partial v} < 0, \frac{\partial^2 L}{\partial d^2} > 0 \). In addition, students’ acceptance also directly affects teachers’ income, and all the factors are set to \( z \). Assuming that \( z \) satisfies\( \frac{\partial L}{\partial z} > 0, \frac{\partial^2 L}{\partial d^2 z} > 0 \), teachers’ income or salary can be expressed as:

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\[
\max_{d,v} N = g_a A^e_a e_a - L(d_a, v, x, z) - \delta(v)
\]
\[
s, t, nA_a = - \frac{\lambda^K x(d_a, x, h)}{\lambda A_a}
\]
(4)

All conditions are assumed to be set to the optimal state available:
\[
g_a e \frac{n_A_a}{n A_a} - \frac{\lambda L}{\lambda d_a} = 0
\]
(5)

that is
\[
\frac{g_a}{1+g_a} \cdot e \cdot n \frac{A_a}{A_a} - \frac{\lambda L}{\lambda d_a} = 0.
\]
\[
\frac{\lambda L}{\lambda d_a} = \frac{g_a}{1+g_a} \cdot e \cdot \frac{\lambda K}{\lambda A_a}
\]
(6)

Therefore, a higher level of teaching services requires teachers with higher and wider knowledge reserve, and more income will ensue. Similarly, in the process of teaching management system innovation, teaching management personnel need to be improved, so that teaching management can be accurately and efficiently carried out in the practical process and a practical support for education and teaching work can be afforded from the macro to the specific level. In this way, the education and teaching activities in colleges and universities are able to guarantee the realization of personnel training strategy; the value of teaching management is contributed to college personnel training under the new era; the practical significance of teaching management in the overall operation of colleges and universities is fulfilled.

4. CONCLUDING REMARKS

In view of the interpretation of the significance of college teaching management in the development of college education cause, the basic principles of the reform and innovation of the college teaching management system include coordinating the relationship between individuals and organizations and pinpointing the functions of teaching management. Based on these two core principles, the innovation of the college teaching management system is developed from three dimensions—to innovate the teaching management system, to optimize the teaching management functions, and to improve the quality of administrative personnel, which is an effective strategy to fulfill the self-value of college teaching management. Furthermore, a scientific and efficient teaching management system is applied to support the implementation of college education and teaching activities and to drive colleges to conduct more effective trainings of innovative talents.

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