Research on the Construction of Undergraduate Career Planning System Based on Post Competency Model

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Abstract

The current knowledge economy has brought new opportunities, as well as put forward entirely new requirements, for talent cultivation in institutions of higher learning. To turn out applied talents that meet the demand of society, we should strengthen education in career planning and help students construct a scientific and rational career planning system, identify the direction for their future development and set career goals based on their actual positions. It is a key task of colleges and universities. Teachers should attach great importance to career planning education, so as to guide students to establish the right values, cultivate in them good professional accomplishments and excellent sense of professional responsibility. In this regard, this paper first probes into the content of post competency model and its specific training mode, on which basis it builds the career planning system with components in student career planning and further analyzes it with the evaluation model to make sure it’s scientific and effective. The system is designed to improve students’ attention to their career, enhance their comprehensive attainment, professionalism, expertise and inner being, etc. all needed for the development of the society.

Keywords: Post Competency, Student Career Planning, System Construction, Evaluation.

1. RESEARCH BACKGROUND

1.1 Literature Review

Career planning has emerged in Western countries in the mid-20th century and is valued by workers in all spheres of society. It requires people to be fully aware of the significance of career before they enter institutions of higher learning, recognize, explore, identify and be well prepare for a career (Sun and Du, 2015). Contemporary college students in China have their own independent thinking and specific demands for their future development and goals. They think highly of the realization of self-worth and long for respect. They have strong subjective consciousness and want to be master of their own lives. However, career education starts late in China and there is not yet a complete career education system, or detailed curriculum and counseling content. As a result, students’ attention to career planning, as well as self cognition and evaluation, gradually declines, let alone their own strengths and weaknesses (Wang and Zhao, 2015). Moreover, in a diverse social context, interfered by external factors, many college students lose their youthful vitality and become more utilitarian. They do not know how to respect others, refuse to work hard, feel confused about their development and have no clear goal for the future. Given all this, colleges and universities should take effective measures promptly to guide students to develop their own career planning system. Teachers should look into student characteristics and actual demands, inform them of the role and content of career planning, and help them form a scientific and rational career planning system.

1.2 Purpose of Research

In view of the poor awareness of career planning and the ideological and psychological characteristics of students in higher learning institutions, this paper, from the perspective of post competency, facilitates students’ understanding of enterprises’ demand for professionals and basic abilities as a modern talent. It will gradually enhance their career planning awareness and active involvement in career planning system. Moreover, by analyzing the key elements of career planning system of college students, it points out the correct direction of the reform for the teaching work, and provides favorable information for teachers to timely adjust their teaching
plans to specific needs of the post so as to realize seamless matching of talents and businesses. (Huang and Zhang, 2016) Students will improve their thinking and abilities in this process, better understand their strengths and weaknesses, find their merits, and engage in study with greater self-confidence. In addition, this paper uses an effective evaluation model to make a comprehensive and effective evaluation and analysis of the career planning system of undergraduates, helping them improving the planning system and lay a solid foundation for their career development in the future.

2. OVERVIEW OF POST COMPETENCY MODEL

2.1 Competency Model

The so-called competency mainly refers to the characteristics and the intrinsic potentials of outstanding individuals in a certain post or industry that distinguish them from those ordinary and with general ability (Wang, 2016). It can be motivation, personality, positioning, attitude or values, expertise in a field, cognitive or behavioral skills, etc. any individual trait reliably for measurement, statistics and differentiating between good and average performance. In general, competency mainly include the following elements: motivation, personality, positioning, knowledge and skills, which are also basic in the well-known “Iceberg Model” that compares post competency to the giant icebergs floating on the water, as is shown in Figure 1.

![Figure 1. Iceberg Model of Post Competency](image)

The upper part of Figure 1 indicates baseline competencies, such as knowledge and skills. It is the key determinant of people’s basic competencies. The lower part of the iceberg indicates discriminatory competencies, also called intrinsic competencies. It is the potential of human beings that’s not easily noticeable but determines people’s behavior and performance, such as social roles, self positioning, personality and motivation (Niu, 2016) Benchmarking features can be developed and enhanced through learning and training, and are necessary for the effective execution of work tasks. They are easy to quantify and evaluate and are the basic requirements for evaluating individual competency. Discrimination competency is a deep-seated and enduring feature in personality, with behavior and ways of thinking difficult to nurture or quantify but are the key differentiators in distinguishing between good and average performers (Zhu, 2013). The ability it emphasizes are cognitive and physical functions required to succeed in a task and achieve the most extensive possible outcome. Competency is not only the ability required to stand out in a task, but also a trait that distinguish between “general performance” and “excellent performance”. It is the ability requirement of an enterprise for employees at their corresponding posts.

2.2 Competency Cultivation

Competency model is also referred to as comprehensive post competency model, or the sum of the elements or characteristics of competencies that should be possessed by a particular role at work or tasks, or the comprehensive capabilities that people must have to complete their work efficiently (Fu, 2013) As college students will inevitably become employees, colleges and universities should train students with post competency model as a guide. Student career planning education is of great significance to students’ cultural accomplishment, work skills and adaptation to the society. The core purpose of post competency model is to clarify the demand for talent in different posts in the enterprise, so that it can be integrated into teaching and students’ self-development to fully enhance their post competency (Zhang and Li, 2013) To construct a post competency model, the first thing is to analyze jobs available to students from different majors according to the orientation and training objectives of the institutions. A cultivation model will then be built on the post competency model, as is shown in Figure 2.
The construction of competency cultivation model should focus on the needs of different posts, and the specific post requirements of different employers. The key to build a post competency model is to analyze its elements and factors for different majors (Wang and Sun, 2013). Only on such a basis can an operational cultivation model will then be constructed.

3. CONSTRUCT COLLEGE STUDENT CAREER PLANNING SYSTEM BASED ON POST COMPETENCY MODEL

3.1 Elements of A Career Planning System

Based on the research of other scholars, this paper constructs the “Spire” model of college student career planning. At the bottom of the “Spire” is self cognition and mainly adopted for freshmen. In the middle are goal establishment and career cognition designed for sophomores and juniors (Wang, 2013). On the top is the correct choice. Details are shown in Figure 3 below.

Self-cognition: an overall understanding of the individual him/herself, including external and internal self-cognition. External self-cognition refers to the cognition of height, weight, appearance, health, etc. Internal self-cognition refers to that of one’s personality, temperament, interests, abilities, values, IQ, emotional intelligence, creativity, mental ability, competitiveness and resistance to setbacks.

Goal establishment: short-term goals, medium-term goals, long-term goals in terms of time. Short-term goals are goals for one year, such as adapting to the new environment (Wang, 2011) Medium-term goals are goals for the four-year university life, for instance, graduate and find an ideal job. Long-term goals can be used as the goal of life, like life planning for the future. In terms of content, it includes goals for learning, practice, and growth. Learning goals refer to the plan for learning, such as obtaining scholarship and passing the grading exam. Practice goals means to participate in social practice activities, association events, etc. Growth goals refers to the cultivation of good personality, keeping health, etc. qualities required for personal development.
Career cognition: Career cognition in a narrow sense refers to the cognition of career-related knowledge, including career status quo and prospects, characteristics and types, remuneration and environment, professional qualifications and industry standards, as well as the cognition of the relationship of profession and major. Career cognition in a broad sense not only includes occupational-related knowledge, but also knowledge of the environmental, such as family environment, social environment, economic situation, national policies, laws and regulations, and employment-related knowledge, national economic environment, and employment policies for graduates and others (Liu, 2011).

Correct choice: Correct choice is to make an effective unity of the future goals, personal potential, as well as subjective and objective conditions after accurately analyzing the internal and external environment. For college students, it is to combine their interests, abilities, character and professional expertise together, based on their self-understanding and career analysis, for the planning of future development.

3.2 Planning System Construction Method

First, self-cognition is an important prerequisite for college students’ career planning. Students should learn to analyze themselves. For one thing, they should make vertical comparison, i.e. comparing the present situation with that of the past and see if there is any progress. For the other, they should make horizontal comparison, comparing themselves horizontally to people around and to figure out their own position. Listening to the evaluation from others is also important for self-cognition (Lou and Zhong, 2015). People of close contact are a good external source of self-cognition, either by conversation or inquiry.

Second, goal establishment is an important part of college student career planning. It should be reasonable and fit their own reality. Students should fully understand themselves, be it family background, professional qualifications, interests, etc., and set goals that are consistent with their own reality. Then try to achieve the goal, and constantly amend the goal. Goals can only be tested and revised in practice. Perseverance is a must, even in the face of setbacks, and self management required to execute the career planning.

Third, career cognition is the external guarantee for college student career planning. It can be obtained from lectures or the introduction of the seniors or even those already graduated. Media and network are another source of information for career cognition, so are career investigation, social practice, internships and professional experience (Lin, 2017). Students can also get direct career experience through work-study programs, teaching internships, production internships, and summer jobs.

4. EVALUATION MODEL STRUCTURE OF COLLEGE STUDENT CAREER PLANNING SYSTEM

4.1 Evaluation Model

An evaluation model is constructed, on the basis of college student post competency model, to further optimize the career planning system, as is shown in Figure 4.

![Figure 4. Evaluation Model of Career Planning System for College Students](image)

4.2 Evaluation Method

AHP is adopted for comprehensive evaluation of career planning system of college students. It is a multi-objective and multi-criteria decision-making method, and one that effectively combines quantitative and qualitative analysis, dividing various factors in the complex problem into related orderly hierarchies (Jin, 2014).
Using AHP to analyze decision making, we must first stratify that problem. Decompose the problem into different component factors according to the nature of the problem and the general goal to be achieved, and form a hierarchical analysis model by combining factors at each hierarchy according to the interaction and affiliation of these factor. Finally, the system analysis comes down to determining the relative importance of the lowest level relative to the highest level, or the relative inferior ordering that provide the basis for decision-making.

The specific calculation method is as follows: First construct a good hierarchical structure model, and judgment matrix B where all the elements in the low level is compared, in pairs, with any of those in the level directly higher than it. Suppose that the element D at the higher level is the criterion and the elements at the low level it dominates are \( P_1, P_2, P_3 \ldots P_n \), then \( B = (b_{ij})_{n \times n} \), where \( b_{ij} \) is the ratio of importance of \( P_i \) and \( P_j \) relative to criterion D.

Then, calculate the maximum eigenvalue and the corresponding eigenvector \( w \) of each paired judgment matrix, and calculate the sameness index \( DI \) and the sameness ratio \( DR \), where \( DI = \frac{\lambda_{max} - n}{n-1} \cdot DR = \frac{DI}{RI} \), and when \( DR \leq 0.1 \), the consistency of judgment matrix is considered acceptable. Finally, calculate the total ranking weights of elements of each level to the overall goal, and sort them to provide the basis for decision-making. If we assume that the ranking weight of the elements in J-1 relative to the overall goal is:

\[
\text{w}^{(j-1)} = (w_1^{(j-1)}, w_2^{(j-2)}, \ldots, w_n^{(j-1)})^T
\]  

(1)

Single ranking weight of \( n_j \) at Level J to the criterion j at j-1 is:

\[
p_k^j = (p_1^j, p_2^j, \ldots, p_{n_j}^j)^T
\]  

(2)

Then, the ranking of elements at Level j to those at j-1 is a matrix:

\[
p^j = (p_1^j, p_2^j, \ldots, p_{n_j}^j)^T
\]  

(3)

The total order of elements at Level j to the overall goal is:

\[
w^{(j)} = (w_1^{(j)}, w_2^{(j)}, \ldots, w_n^{(j)})^T
\]  

(4)

i.e. \( w^{(j)} = p^{(j)} \Lambda p^{(2)} w^{(2)} \)  

(5)

Use simple method to calculate the eigenvalues and eigenvectors of the alignment matrix, as is shown below:

\[
\text{ Normalize vectors at each column of the matrix B, then:}
\]

According to \( \overline{w_j} \), we can get \( \overline{w_i} = \frac{\sum_{j=1}^n \overline{w}_{ij} \cdot w_{ij}}{n} \).

Normalize \( \overline{w_i} \), then:

\[
\text{ w} = (w_1, w_2, \ldots, w_n)^T
\]  

Calculate \( \lambda = \frac{1}{n} \sum_{i=1}^n \frac{(Bw)_i}{w_i} = \frac{1}{n} \sum_{i=1}^n \frac{\sum_{j=1}^n b_{ij} w_j}{w_i} \) as the similarity of the largest eigenvalue, \( (Bw)_i \) represents the ith weight. In fact, this method normalizes the column vectors of A and takes the average value as the eigenvector of B. When B is a consistent matrix, then each column vector of B is an eigenvector. Therefore, if B is not much inconsistent, then it is reasonable to take the normalized average of B as the approximate eigenvector.
Consistency check: Due to many factors, paired matrix seldom shows strict consistency. Therefore, after the eigenvalues are obtained, its consistency will be further tested:

\[
\text{Consistency indicator: } DI = \frac{\lambda_{\text{max}} - n}{n-1} \quad \text{Consistency ratio indicator: } DR = \frac{DI}{RI}
\]

When CI=0, the paired matrix is perfectly consistent, but the larger the value is, the greater the deviation from consistency will be.

5. CONCLUSION

Career competency model is constructed to identify the future post demand for professionals through the key characteristics of the environment, variables and talents. It is a strategic approach to career planning and design that can meet the current social demands for future posts, and that of social development. All in all, colleges and universities should pay full attention to career planning education for college students, and help them formulate a planning system that suits their own actual conditions, so that they can better understand themselves and improve their overall literacy and abilities, laying a sound foundation for career development in the future.

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