

College Students' Occupation Competence

SU Wenbo^{[a],*}

^[a]Law School of Shenzhen University, Shenzhen, China.
*Corresponding author.

Received 16 February 2013; accepted 9 May 2013

Abstract

By reviewing relevant theories, the competency evaluation model is applied to construct the system of College Students' occupation ability analysis. It constructs a competence evaluation index system for higher school undergraduate occupation, and has analyzed the problem of our country university students' difficulty in the employment from the perspective of professional competence. This article acquired the effective samples from the graduates through the behavioral event interview method, while for the college students adopt the method of questionnaire, and collect the relevant data of the condition of students' occupation competence, through scientific analysis, finally established the basic framework of the competency model. Make an objective evaluation of the result of the analysis from the awareness, knowledge, ability, attitude four aspects using the fuzzy comprehensive evaluation method, and find out the shortage of the competency, in illustration to the shortage, we ensure the formation of college students' occupation competency from the aspect of higher school teaching reform's consummation. This has certain practical guiding significance of improving the quality of university students' employment from providing a ladder incremental evaluation system of the cultivation of the college students' employment ability.

Key words: Employment of undergraduates; The characteristics of competencies; The model of competency; Training of professional talents

SU Wenbo (2013). An Analysis of College Students' Occupation Competence. *Canadian Social Science*, 9(4), 85-91. Available from: <http://www.cscanada.net/index.php/css/article/view/j.css.1923669720130904.2581>
DOI: <http://dx.doi.org/10.3968/j.css.1923669720130904.2581>.

INTRODUCTION

In recent years, the employment situation of university graduates in China is becoming more and more severe, University students' employment difficult has many subjective and objective factors, such as structural contradiction is prominent, the oversupply of labor etc., but the deeper reason lies in if the level of college student's ability meet the needs of employers or not. The employment of college students is with not only absoluteness but also relativity. Absoluteness is a reflection of the lack of employment opportunities, while relativity reflects that the college students do not have the ability to competent for jobs (Yang & Zheng, 2012). Relativity shows that students cannot simply rely on some specific knowledge or skills to achieve success in employment, for competency abilities with more imitable, flexible are essential. For this, some of the foreign scholars like McClelland analyses questions in personnel measurement and selection mechanism, advocate using competency assessment to replace the traditional academic achievement and aptitude test, which offer one foundation of the birth of competency theory (McClelland, 1973). Competency is called "excellent genes of organization development"; competency model is a good tool and approach to solve the problems above. At present, the competency model has gradually become the advanced managing tool to help enterprises improve the staff selection, training, promotion and so on. From all this

time, research and application of domestic competency theories in the college students employment ability system, and has not yet formed a perfect and scientific research system, and its actual operation and guidance is not sufficient (Zhao, 2006). This paper attempts to explore the forming factors and evaluation system of College Students' competency model of occupation, construct the competency model of College Students' employment ability, further to designs a guarantee mechanism connected with several key competency characteristics, and then put forward the security mechanism of the competency model through analysis.

1. COMPETENCY AND THE MODEL OF COMPETENCY

1.1 The Definition of Competency

The concept of competency is put forward by Robert White in 1959. And in 1973, David McClelland published the paper called 《measurement of competency rather than intelligence》, proposing that use measurement of competency instead of traditional intelligence test. Competence is from the aspect of organization's strategic development needs, in order to strengthen the competitiveness, and to improve the actual performance, it's a unique human resource management mode including ways of thinking, methods of operation and processes of operation. To be short, competency is a group of required knowledge, skills, abilities and qualities for employees whose performance is superior in an organization.

1.2 The Model of Competency

The model of competency is used to describe combination of series of different competency elements for finishing some project or meeting a certain performance targets, including different motives, requirements of personality and quality, self-imagination, social role features and the level of knowledge and skills, etc. Enterprises generally should ensure the staff can be qualified for the positions, and further to realize their maximum potential competency abilities. After nearly 20 years of research and application about competency, Spencer and other scholars proposed “the Onion Model”, and “the Competency Dictionary”, “the new Iceberg Model”, Etc.. The Onion Model consists of three concentric circles. The innermost circle represents a trait / motivation, and the middle circle represents self-conception, social roles, attitudes and values, the outermost circle represents skills and knowledge (Boyatzis, 1982). Competency dictionary thinks that competency consists of 7 dimensions. The new Iceberg Model insists that competence is divided into two parts: knowledge and skills just like the iceberg exposed above water, which is also called “threshold competence”. This part consists the requirements for basic qualities belonging to competent persons, but this part is impossible

to distinguish outstanding persons and the mediocre persons (Spencer & Spencer, 1993). Part of iceberg underwater consists features of competency like social role, self-concept, character and motivation, which are key elements to distinguish the differentiating competency, and they are called “differentiating competence” (Spencer & Spencer, 1993). Since McClelland proposed the concept of competence in 1973, its theories and applying models researches have always been hot spots in the field of management science, psychological science and organizational behavior around the world in recent years. Some domestic scholarships began their study from managers, recent years; some scholarships began to pay attention to the college students' occupation competence model. Since 2004, Songping Zhao make a summary of the occupation ability for five features, that is the occupation ability to face the waiting unit of time; the durative ability to face the information time; the technic occupation ability to face the market economy; the ability of competition to face talent market (Zhao & Zhao, 2004). By 2010 Ruosong Yao understand enterprise by means of questionnaire on university life professional competency requirements, building the characteristic model: six factors dimension of task management, self-management dimension, interpersonal dimension management, logistics capability dimensions, adventure innovation dimensions, post management dimension (Yao, 2010). During the learning period, College students are still in the stage, when their knowledge, skill, ability and quality are quite malleable. Therefore, the research on college students' occupation competence model, on the one hand, can guide the college students in enhancing ability training and exercising, so that college students can meet social requirements much better. On the other hand, it can help the employer to formulate corresponding selection tools, to identify persons they required better when they are recruiting college students.

2. THE ESTABLISHMENT OF INDEX SYSTEM OF COMPETENCY EVALUATION

2.1 Collect Competency Features Items of Employment of Graduates

This paper established employment demand questionnaire for college students on the basis of situation of their employment competence, further used the collected result as one basis of determining outline of competence model. This paper adopts questionnaire of competency model based on general positions. General questionnaire focus position competence characteristics model mainly includes professional consciousness, professional knowledge, professional ability, professional attitude and so on four aspects. The questionnaire included 4

subscales. The first part is the consciousness of occupation evaluation questionnaire, to investigate professional ethics and work style when employers in positions do relevant professional work, containing a total of 20 questions; the second part is questionnaire for assessing professional knowledge, for investigating learning situation, effect and application of knowledge during their undergraduates stage, with a total of 20 questions; the third part is questionnaire of their professional competence evaluation for investigating the interpersonal communication ability, analysis and judgment ability, executive ability and the ability to cope with stress in the process of operating some certain job, with a total of 25 questions; the fourth part is questionnaire investigation of occupation attitude, for solving mental state of a position, containing a total of 15 questions. We issued 300 questionnaires in total (actually give out 294), and the questionnaire recovery rate is 97.9%. The author carried out a considerate analysis of the questionnaire survey, did statistical analysis according to position classification, extracted outstanding quality indexes from different positions, and eventually formed the initial framework of competency model of College Students' employment ability.

2.2 Analyze Data and Find Out the Features of Competency

This paper adopts method of Behavioral Event Interview to obtain the competency data about criterion samples. Method of Behavioral Event Interview is mainly used to determine the characteristics of college graduates engaged in positions, collect detailed information of their concrete behavior and mental activities in the representative events through a series of problems (Peng, 2007). This paper has made one investigation of characteristics of positions from 300 graduates, compared and analyzed the collected information, and expect to find out personal traits the competent persons possess.

3. CONSTRUCTION AND EVALUATION OF THE COMPETENCY MODEL OF GRADUATES PROFESSIONAL TALENTS IN COLLEGES AND UNIVERSITIES

3.1 Construction of the Competency Model of Graduate Professional Talents

The construction of College Students' Occupation Competence model is a systematic engineering, it needs to consider not only about the comprehensiveness of index system that the competence model related to, but also the science and feasibility (Zou & Qiao, 2005). This paper constructs this model from four aspects that is: consciousness, knowledge, ability and mentality. The specific levels are as follows:

Table 1
The Levels Structure of College Students' Occupation Competence

Object	First level indicator	Second level indicator
College Students' Occupation Competence model	consciousness	Pay attention to the detail(A1)
		Initiative/responsibility(A2)
		Conscious of team work(A3)
	knowledge	Academic education(B1)
		Work experience(B2)
		Profession knowledge(B3)
	Ability	Learning capability(C1)
		Innovation capability(C2)
		Appetency(C3)
	Mentality	Wish to success(D1)
		Persistence/toughness(D2)
		Self-development(D3)

3.2 Evaluation of the Competency Model of Graduates Professional Talents

We should make sure about the weight of every index at first. There are many ways to calculate the index. To combine the fixed character and fixed amount, we usually take the way of Delphi and level analysis to deal with. That the experiments has proved that it is more operative to use the way that professions give marks which can make sure the weight of every index integrated. And then to evaluate it by the way of vague integrated assessment. The specific steps are as follows.

3.2.1 To Build Factor Team and Evaluation Team

The factor team U is consist of all kinds factors that can influence the judge objects, $U = u_1, u_2, \dots, u_n, n = 12$, Evaluation team V is consisted of all kinds of general evaluation results that the judger may give. $V = v_1, v_2, \dots, v_n$..Here I will choose five evaluations to make up a team. As the form:

Table 2
The Evaluation Team of College Students' Occupation Competence

Evaluation team V	Excellent	Good	Ordinary	Short	Do not have
Marks S	≥ 90	80	70	60	≤ 50

3.2.2 The Confirmation of Competence Membership Grade

Taking the way of the triangular distribution function as membership function to make sure the membership grade of the influence of evaluation factors:

$$u_x = \begin{cases} 0 & 0 \leq x < 80 \\ (x-80)/10 & 80 \leq x < 90 \\ 1 & 90 \leq x \leq 100 \end{cases} \quad (4-1)$$

$$u_x = \begin{cases} 0 & 0 \leq x < 70 \\ (x-70)/10 & 70 \leq x < 80 \\ 1 & x=80 \\ (90-x)/10 & 80 < x < 90 \\ 0 & 90 \leq x \leq 100 \end{cases} \quad (4-2)$$

$$u_x = \begin{cases} 0 & 0 \leq x < 60 \\ (x-60)/10 & 60 \leq x < 70 \\ 1 & x=70 \\ (80-x)/10 & 70 < x < 80 \\ 0 & 80 \leq x \leq 100 \end{cases} \quad (4-3)$$

$$u_x = \begin{cases} 0 & 0 \leq x < 50 \\ (x-50)/10 & 50 \leq x < 60 \\ 1 & x=60 \\ (70-x)/10 & 60 < x < 70 \\ 0 & 70 \leq x \leq 100 \end{cases} \quad (4-4)$$

$$u_x = \begin{cases} 1 & 0 \leq x < 50 \\ (x-50)/10 & 50 \leq x < 60 \\ 0 & 60 \leq x \leq 100 \end{cases} \quad (4-5)$$

u_x stands for the membership function, x stands for the marks made according to the evaluation team gives.

3.2.3 The Establishment of Fuzzy Judgment Matrix

According to membership function and the marks that professors give can build the matrix as follows:

$$R = \begin{bmatrix} R_1 \\ R_2 \\ \vdots \\ R_n \end{bmatrix} = \begin{bmatrix} r_{11} & r_{12} & \cdots & r_{1n} \\ r_{21} & r_{22} & \cdots & r_{2n} \\ \cdots & \cdots & \cdots & \cdots \\ r_{n1} & r_{n2} & \cdots & r_{nn} \end{bmatrix} \quad (4-6)$$

The element R in judgment matrix r_{ij} is j objects in the factor i about the membership degree about the evaluation set, the weighted score of the competency assessment index:

Table 3
The Weight and the Marks of College Students' Competency Evaluation Index

First level indicator	Weight	Second level indicator	Weight	Marks	Membership grade				
					Excellent	Good	Ordinary	Short	Do not have
Consciousness	0.3	A1	0.3	0.3	64	0	0	0.4	0.6
		A2	0.2	0.2	72	0	0.2	0.8	0
		A3	0.5	0.5	80	0	1	0	0
Knowledge	0.2	B1	0.3	0.3	75	0	0.5	0.5	0
		B2	0.4	0.4	70	0	0	1	0
		B3	0.3	0.3	81	0.1	0.9	0	0
Ability	0.3	C1	0.3	0.3	74	0	0.4	0.6	0
		C2	0.4	0.4	75	0	0.5	0.5	0
		C3	0.3	0.3	73	0	0.3	0.7	0
Mentality	0.2	D1	0.4	0.4	81	0.1	0.9	0	0
		D2	0.2	0.2	75	0	0.5	0.5	0
		D3	0.4	0.4	90	1	0	0	0

3.2.4 Fuzzy Comprehensive Evaluation

The influence of the expert scoring method of factor weight vector of fuzzy evaluation model

$$[0.3 \ 0.2 \ 0.3 \ 0.2] \times \begin{bmatrix} 0 & 0.54 & 0.28 & 0.18 & 0 \\ 0.03 & 0.42 & 0.55 & 0 & 0 \\ 0 & 0.41 & 0.59 & 0 & 0 \\ 0.44 & 0.46 & 0.1 & 0 & 0 \end{bmatrix} = [0.094 \ 0.461 \ 0.391 \ 0.054 \ 0] \quad (4-7)$$

Calculate the total score ranking: $[0.094 \ 0.461 \ 0.391 \ 0.054 \ 0] \times [90 \ 80 \ 70 \ 60 \ 50]^T = 75.95\%$

According to the principle of maximum degree of membership, the present stage of our country college student occupation competence level is ordinary.

The study showed that college students' employment competence belongs to basic competence level, and there is some distance between the situation and social demand. Its forming factors are complicated. In the aspect of consciousness, some Students only attach importance to learning something like job skills and so on, while ignore

to train the ability of career planning, self-awareness and employment target positioning, not accurately identifying themselves. These students don't know what they can do or what they want to do, even without the accurate learning about their own professional interest and professional potential. In addition, they should strength the idea of paying attention to details and teamwork. In the aspect of knowledge, essentials of basic training are not practiced enough, and skills are not so proficient.

Nowadays there are some universities that have the tendency of paying much more attention to professional courses rather than basic courses in a certain way, due to the mode of enrollment specialized training. As a result, students in these colleges are lack of theoretical knowledge very much. Lack of “Market orientation”, colleges and universities have emerged the phenomenon of disconnecting between professional courses setting and market demand, which makes the professional knowledge students learned far away from actual production, with nearly 30% students’ professional skill not proficient and even not comprehending. In the aspect of basic abilities, there is a overall promotion, while part is weakening. With the steady progress of quality education, as a whole the comprehensive quality of college students has a improvement in a certain degree, especially the ability of learning generally improving. However in terms of special ability, special skills have being increasing, without sufficient innovation. As the students born after 80’s and even after 90’s get into university, the vast majority of the students’ special projects are mainly recreation and sports, while students having strong scientific research innovation ability are quite relatively few. In the fierce market competition, innovative talents are the foundation for market main body to win. And in the process of unit choosing and employing people, it is paid attention to more and more. Because of the popularity of network, the environment for single child to growing and other reasons, affinity, in the forms of language expression ability and cooperation ability, has the weakening tendency. They can’t make full use of language to express their thoughts so that they can be failed in the interview process, which has affected the students’ employment. In terms of mentality, the hunger to success is generally high. Even though there is some space for social cognition and judgment to self-develop, continued resilience needs to enhance. As the university students’ employment difficulty gradually improved, both in colleges and students are paying more and more attention to Students’ Occupation Competence.

4. COUNTERMEASURES AND SUGGESTIONS TO IMPROVE THE COMPETENCY FOR COLLEGE GRADUATES’ OCCUPATION

Since the cultivating of college students’ employment competence is a systems engineering, which needs cooperation and joint efforts from the governments, colleges and universities, all kinds of enterprises and institutions at all levels in our country, and college students themselves as well. This paper put forward concrete measures of improving college students’ vocational competence only from aspect of the main trainers - institutions of higher learning.

4.1 Clear the Training Objectives of Undergraduate Professionals

The training objectives of college graduates is not only the premise of teaching plan, but also the basis evidence to for determining the training specifications, the setting of curriculum, arranging teaching content, and choosing teaching method. According to the actual needs of the market economy and social development, revising professional goal and teaching plan in time is an important agenda and basic work during teaching reforming in colleges and universities. If the training target positioning of undergraduate is inaccurate and with lack of personality, it will directly affect the revision of professional structure and the adjustment of teaching plan, and also be not beneficial to the cultivation of compound talents with innovation spirit and practice ability. Generally speaking. For graduates in colleges and universities, no matter its requirement of market economy or being the basic features of modern education, we should fix position of the twenty-first century graduates professional as application-oriented professional talents faced to enterprises.

4.2 Implement Reforming of Curriculum System for the Employment Direction

According to the evaluation index system, the employment ability is divided into 4 dimensions clear the ability requirements for the four dimensions determine the content of knowledge and skills of each specific position, list the corresponding learning courses. In the design of curriculum structure, it regards the job demand as main goal, with the starting point and the foothold to improving the performing ability of positions. Use teaching mode of internship for replacing the official posts as the core part, in order to make the students can experience and be familiar with the whole process, feel the work atmosphere, which enhances the student’s employment ability, and improves their professional skills, with comprehensive qualities of graduates’ occupation.

4.3 The Implementation of Competency Teaching Reform

We should find out the gaps between current Colleges and universities teachers’ competency features scale and post demand scale, and also train the teachers which can promote the development of teachers. A good teacher who reflect innovation consciousness and personality charisma is immeasurable. The keys of education lies in teachers whose quality and ability largely determines the quality and level of education. It is very difficult to cultivate innovative talents without innovative teachers. Teachers can have a far view, can have some renewal of ideas, and also some innovations, some reforms of teaching, so teachers are the fundamental guarantee to reform classroom teaching, improve teaching quality and develop students’ innovation ability. From these we can recognize

that we must improve the teachers' quality as soon as possible, which includes thought and morality quality, professional quality, psychological quality, body quality, and so on. Starting from the point of view, colleges and universities should take a series of measures to build a group of teachers with a strong sense in innovation, the courage in exploring, and the consciousness in being good at training students' innovation and creative ability. For instant, to provide all kinds of opportunities to train and reeducate as it can give teachers the possibility of continuous improvement, which makes teacher always in the times of the wave and the frontier. To promote the young teachers do some part time jobs or hangs duty in some companies can enhance teachers' competency ability, which will make the young teachers get contact with advanced technology and the latest industry information in the first time, strengthen professional levels, improve teaching ability and guarantee the high quality of teaching.

4.4 Reforming Practical Teaching and Improving the Practice Teaching Link

The core target of practice teaching is to cultivate students' practical ability and occupation accomplishment, and to promote the formation of students' basic ability and quality which is needed in work after graduation. As we all know that it is valuable only when the consciousness can put into practice. Compared with the western developed countries with strong education, China is relatively weaker on the hand of practice ability. Scientific innovation requires constant practice, continual exploration. Teachers should pay attention to strengthen students' practical training and proper design of innovative practice, to enhance the students' practical ability. Let's take economic management courses for example; it should be more into enterprises, combining the course with some social investigation and market strategy analysis. And science and engineering courses should be pay attention to the teaching content and the production practice, with combining research paradigm with practical problems which can provide the practical background and real data as much as possible, give the concrete model. The laboratory course should set up much more designs and comprehensive experiments. Cooperating to build a practice base, make students learn and participate in the entire process, which can greatly improve the students' professional practice skills.

4.5 Improving the Professional Ability and Strengthening the Consciousness of Occupation

Colleges and universities should energetically provide education in various forms and multiple choices for students, to create conditions for students to find out their potential, talent and strengths, develop their interests, and promote its height, realizing the unity of personality development and social responsibility. School should

focus on students' employment to open "occupation career and development planning", "employment guidance", "innovation" entrepreneurial guidance courses, Though he study of these courses, making students have a good employment consciousness and employment mentality. So schools can construct the employment oriented competency training evaluation system, which can be used as an effective tool to assess their occupation competence characteristics. And also it has the very good practical significance to cultivation and improvement of the students' employment quality.

CONCLUSION

This paper has a preliminary understanding of College Students' career competency expectations and current students' practical competence difference between quality structures. According to the difference of employment, it contracts undergraduate professional competency evaluation index system, and determines the membership degree by triangular distribution function. Finally, it puts forward some opinions and suggestions on validity, feasibility of the model, helping students to achieve the consistence between workplace competence status and job competency model which the employer is required, combined with social needs, having certain theory value and application value. That is to say that this thesis is on the theory of competency model of a specific application and practice. Only correctly understanding the supply-demand relationship between college students and the employers, and doing empirical research based on the theory of competency model, can we develop the "three win" optimal solution accords with college students, employers and college. That is to say the study of employment competence evaluation index system. The author hope that relevant employment competency models and career competency status quo of the research can get more and more attention from various aspects with the development of competency models and related theories, leading to richer researching results. How to build a more scientific, more comprehensive evaluation index system for college graduates employment competency still some further research.

REFERENCES

- Boyatzis, R. E. (1982). *The competent manager: A model for effective performance*. New York: Wiley.
- McClelland, D. C. (1973). Testing for competence rather than for intelligence. *American Psychologist*, 28(1), 1-14. doi: 10.1037/h0034092
- Peng, P. G. (2007). How to operate BEI; Competent quality model building. *Human Resources*, 38-40.
- Spencer, L. M., & Spencer, S. M. (1993). *Competence at work: Models for superior performance*. New York: John Wiley & Sons.

- Yang, X. N., & Zheng, W. (2012, 05). Research on undergraduate students' employability. *Scientific Decision Making*, 79-91.
- Yao, R. S. (2010). University graduates are qualified for feature model (competency model) building research. *Journal of Educational Development*, 43-45.
- Zhao, L. J. (2006). Based on the personality characteristics of managers competency model. *Journal of Liaocheng University (Natural Science Edition)*, 108-110.
- Zhao, S. P., & Zhao, L. (2004, 11). The development of the theory of college students' employment ability. *Education and Vocation*, 65-66.
- Zou, Q. Q., & Qiao, X. D. (2005). About the unit of choose and employ persons professional ability for higher vocational graduates of requirement investigation and analysis. *China's Vocational and Technical Education*.