

Research on Gender Difference in College Students' Cognition on Their Employment Ability

Investigation Based on National College Graduates*

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Abstract—This paper made an investigation on college students' individual cognition on their employment ability and self-employment ability from gender difference point of view based on the employment status questionnaire on graduates from colleges and universities of China in 2016, in combination with their employment satisfaction and academic record and other breakdown dimensions. The result proves that college students' cognition on their employment ability has remarkable difference due to gender difference and has large difference in aspect of self-ability cognition. This has certain relation to their physiological feature and social expectation. But the more important thing is that relevant department should improve previous cultivation on employment ability of college students to improve the employment quality.

Keywords—gender; employment ability; college graduates; difference

I. INTRODUCTION

At present, employment problem of college students increasingly attracts extensive attention. This problem mainly embodies in the "employment difficulty" in quantity and structure of graduates, the institutional and regional segmentation co-existing employment market, insufficiency and asymmetric employment information and other practical conditions. From external conditions, the reason is that employment press is increased to some extent due to the slowdown in social and economic development, the increasingly intense international economic and trade environment and the growing quantity of graduates. From the internal conditions, an important reason for the employment difficulty of college graduates is in individual's insufficient employment ability and the difference in individual's employment ability cognition. However currently, Chinese research on cultivation of employment ability still lies in exploration stage and is still lack of cognition on the connotation and extension of employment ability itself.

But many researches have proved that as an important measure of the personal growth of college graduates, an important carrier for matching the individual ability and position of graduates and an important tool for future career

development and planning, employment ability itself is of great significance to college students. Accordingly, college graduates' cognitive level on their employment ability affects whether they can correctly make self-evaluation and whether they can meet their own career development, employment, and entrepreneurial needs and targets under the market condition. Therefore, a systematic analysis on college graduates' cognition on their employment ability has certain significance for cultivating their employment ability and improving their employment level.

With respect to employment ability, gender difference is also one of the key factors. Female student and male student have their respective characteristics. From a physiological point of view, male have advantages in physical quality, logical thinking and spatial orientation; while females have advantages in language ability and perceptual thinking. From a social point of view, the society's expectation for female is more focused on bearing family responsibilities. Thereby, female it is easier to be treated unfairly or even be discriminated. Especially after the liberalization of the two-child policy, under the same employment capacity, female's employment pressure is greater than that before as what enterprise considers is the cost in human resource input and output.

Based on the above discussion, this paper explored the gender difference in the employment ability cognition of college students by analyzing the employment competence and employment ability cognition of male and female from the perspective of gender difference. It is expected to reveal the detailed dimension of gender difference in employment ability of college students so as to provide academics with research achievements more closely combined in theory and practice as well as generality and particularity and further promote optimizing various factors in the cultivation system of employment demand side, colleges and universities and promote the humanity and scientific performance of colleges and universities in employment service.

II. LITERATURE REVIEW

Foreign countries started early in research on employment capacity development and construction. Since the beginning of the 20th century, such research has been formed into a systematic research theory and achievement.

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While Chinese research on the development of employment ability was gradually conducted with the increasingly prominent employment problem on college students after the college expansion plan. This research is still in its starting and development stages. According to existing researches, Chinese and foreign countries' researches on the dimension of employment ability structural factors is mainly divided into two-dimensional, three-dimensional, four-dimensional, five-dimensional and more dimensions of structures.¹ From those dimensions, two-dimensional employment ability mainly gets across the employability from the perspective of two points. It is believed that the abilities shown in two dimensions are both opposite and unified, such as internal factors and external factors, general cases and special cases, etc.; while three-dimensional structure, combined the identity traits of college graduates, has analysis and interpretation functions. For example, in the early researches of Knight and York, employment ability structure is divided into three levels, namely personal trait, core competence, and process technology.² In the employment ability framework developed by the Conference Board of Canada, employment ability structure is divided into three dimensions such as basic skills, personal management skills, and team work skills, including 11 secondary indicators such as communication, information management, mathematical application, thinking and problem solving, positive performance, responsibility, adaptability, and continuous learning, safe operation, cooperation with others and joint participation. Wang Ting, Zeng Xiangquan and Yang Yumei created an employment ability model on college students including three dimensions such as knowledge, skills and attitude from the perspective of employer's needs. They also conducted empirical research on the demand, shortcoming and cognition difference of employment ability of college students by making an investigation on employers, college teachers and graduates and put forward a "college students' employment ability improvement" oriented higher education talent cultivation mode³; while four-dimensional model is represented by the human resource management theory and is a specific application of the KASO model.⁴ For example, scholar Mitchell believes that employment ability includes intellectual ability, social and interpersonal skills, business and entrepreneurial abilities and diversified technical skills.⁵ Five-dimensional structure is actually a further detailing and expansion of three-dimensional model. It complements the ability requirements from the perspective of sustainable

employment.⁶ Newcastle University in the UK created an employment ability framework on the basis of five dimensions such as subject knowledge and understanding, cognitive skills, self-management, interpersonal communication, and application skills. This framework includes professional knowledge, critical thinking, mathematical ability, information literacy, communication, teamwork, ethical consciousness, social culture and global consciousness and other indicators.⁷ In domestic researches, the college students' employment ability scale designed by Wang Peijun has a large influence. This scale includes five dimensions such as job hunting ability, analysis ability, competence, working ability and moral strength. In detail, it includes 23 skills such as interpersonal skills, independent work ability, logical analysis ability, learning ability, reaction and contingency ability, loyalty, and responsibility consciousness.⁸ Through the above simple sorting, it is not difficult to find that there are differences between the employment ability frameworks developed by different institutions or individuals. But they also have great similarities, and the specific indicator included is mainly generality. Namely, with respect to the investigation indicators of employment ability and the design of operation definition, domestic and foreign researches have some differences in selection of the dimensions of primary indicators. But that in selection of the dimensions of secondary indicators is basically the same. Questionnaire used in this research mainly takes personal ability, employment ability, ideological attitude and social ability as the dimensions and takes practical ability, learning ability, problem solving ability, logical analysis ability, anti-pressure ability, active employment ability, employment demonstration ability, employment development ability, professional responsibility consciousness, professionalism, positive optimism, interpersonal skills and teamwork ability to construct and design a social indicator system.⁹

III. DATA ANALYSIS

In this research, graduates of different majors and educational background from college and universities under 985 project and 211 project (not under 985 project), common colleges and universities, independent college, research institute, higher vocational college and other categories of school in 29 provinces in China (municipalities directly under the central government and autonomous regions) were investigated by using the "National college students' employment status questionnaire" formulated based on previous research achievements of our research team, with reference to the employment status of previous graduates and

¹ Jia Lijun, Guan Jingjuan. Research on Employment Ability Structure of College Student [J]. Research in Educational Development, 2013, 33(Z1):51-56.

² Peter T. Knight and Mantz Yorke. Employ Ability Through the Curriculum, Tertiary Education and Management 2002, (8).

³ Wang Ting, Zeng Xiangquan, Yang Yumei. Research on Ways to Improve Employment Ability and Solve Structural Unemployment Problem of College Student [J]. Population & Economics, 2011, (3).

⁴ Li Ying, Liu Shanren, Weng Saizhu. Influence of College Students' Employment Ability on Employment Quality [J]. Higher Education Exploration 2005, (2).

⁵ Mitchell A G. Strategic Training Partnerships Between the State and enterprises [M]. International Labour Organization, 1998.

⁶ Jia Lijun, Guan Jingjuan. Research on Employment Ability Structure of College Student [J]. Research in Educational Development, 2013, 33(Z1):51-56.

⁷ Wang Yarong, Ma Nianzhen, Fei Jianzhong. A Case Analysis: On the Development of Newcastle University Students' Employment Ability [J]. Journal of Guizhou Educational Institute, 2012, 28(07): 43-47.

⁸ Wang Peijun. Research Summary on Graduate Employment Ability Model [J]. Education and Vocation, 2009 (32).

⁹ Yang Xiaohui. Report on Employment and Entrepreneurship Development of Chinese College Students, 2013-2014 [monograph] [M]. People's Publishing House, 2015.

in combination with the actual social and economic development and labor force market of the year. Finally, 6282 valid samples were obtained.

A. Gender Difference Comparison on Cognition of the Importance of Employment Ability

To examine students' cognition on the importance of employment ability, this research used a 5-point scale to measure the student's cognitive situation. Wherein, 5 represents very important and 1 represents very unimportant. In general, the top three important items of different dimensions of employment ability in cognition of male are practical ability, problem solving ability and teamwork ability; while female thinks that practical ability, professional responsibility consciousness, and teamwork ability are the three most important dimensions of employment ability. At the same time, the highest score for male's employment ability is 4.37, while that for female is 4.47, and the scores for the remained abilities of female are mostly higher than that of male. Average score for male's cognition on 13 items of employment abilities is 4.24, while that for female reaches 4.38. This is mainly because female labor has high naturally-attached cost. Especially after graduation, female college graduates often assume the social responsibility of human reproduction itself based on age considerations. Therefore, in the employment of female, there is a period of employment downturn period. Employer needs to pay higher cost in this period for female. Therefore, during the employment, female also needs to put so more energy that each ability item is also considered very important in the employment ability score.

As can be seen from the overall situation of the 13 employment ability evaluation indicators in the following "Table I", male and female have large the difference in cognition of practical ability, learning ability, employment demonstration ability, professional responsibility consciousness, professionalism, positive optimism, teamwork, and resistance to stress. And all females think that the said factors are more important during employment than what males think. Wherein, male and female's largest cognitive difference is in the professional responsibility consciousness and average difference reaches 0.18. Over a test on the independent sample t, it can be seen that value sig is less than 0.01, which indicates that different gender of graduates has largely different cognition on professional responsibility consciousness in general. Female believes that professional responsibility plays more important role in employment ability than female believes. While, the cognitive difference between male and female's logical analysis ability and active employment ability is small and the difference in their average scores is 0.02. However, over a test on the independent sample t, it is concluded that value sig logical analysis ability is 0.51, and that of active employment ability is 0.362. Hence, there is small difference in the male and female's cognition on their logical analysis abilities in the employment ability. This relates to the quality of the labors themselves. Under the environment of colleges and universities, both male and female's logic analysis ability of the students will be improved somewhat and will have considerable knowledge on the importance of logic analysis ability in working after subjecting to the academic training of courses.

TABLE I. DIFFERENT GENDER OF COLLEGE GRADUATES' COGNITION ON THE IMPORTANCE OF EMPLOYMENT ABILITY

Cognition on factors affecting employment		Overall average value	Practical ability	Learning ability	Problem solving ability	Logic analysis ability	Positive employment ability	Employment demonstration ability
Average	Male	4.24	4.37	4.22	4.34	4.26	4.25	4.05
	Female	4.38	4.47	4.32	4.38	4.28	4.27	4.17
Cognition on factors affecting employment		Professional responsibility consciousness	Professionalism	Positive optimism	Interpersonal skills	Teamwork ability	Anti-pressure ability	Employment development ability
Average	Male	4.24	4.24	4.23	4.27	4.32	4.21	4.12
	Female	4.42	4.36	4.32	4.32	4.41	4.36	4.18

B. Dimensions of Employment Ability

In general, male's total score in individual employment ability is 3.802 and female's total score in that ability is 3.794. Male is more likely to believe that his individual employment ability is strong. Among the various ability dimensions as shown in "Table II", male graduates believe that their professional responsibility consciousness is the strongest, scored 4.01 and their employment demonstration ability is the weakest, scored 3.60. Female graduates believe that their professionalism is the strongest, scored 4.14 and their employment demonstration ability is the weakest, scored 3.54. Among problem-solving ability, logical analysis ability and employment development ability, male thinks that they have stronger ability than female thinks; while

among professional responsibility consciousness, professionalism and positive optimism, female thinks that her ability is stronger than male. This is relevant to the personality traits of male and female. According to social gender theory, gender roles are the behavioral patterns that male and female follow under influence of the society. In gender roles, male and female are endowed with defined roles of "male" and "female". Everyone demonstrates different gender traits in the society based on his/her role. The opinions rooted in gender roles such as "males and females should be treated differently", "male should work outside and female should manage household affairs" are not novel. Hence the advantage of being a male is more prominent in modern social competition. However, those personality traits also affect the self-core competitiveness

cognition of different gender of graduates in their employment. Male has advantage in solving problem and

logic analysis, while female has advantage in professionalism and other perceptual aspects.

TABLE II. DIFFERENT GENDER OF COLLEGE GRADUATES' COGNITION ON THE THEIR SELF COMPETENCE

Self-competence cognition		Practical ability	Learning ability	Problem solving ability	Logic analysis ability	Positive employment ability	Employment demonstration ability	Employment development ability
Average	Male	3.71	3.85	3.77	3.78	3.63	3.60	3.68
	Female	3.67	3.86	3.66	3.57	3.71	3.54	3.59
Self-competence cognition		Professional responsibility consciousness	Professionalism	Positive optimism	Interpersonal skills	Teamwork ability	Anti-pressure ability	
Average	Male	4.01	3.99	3.96	3.69	3.90	3.86	
	Female	4.12	4.14	4.05	3.75	3.86	3.80	

Detailed in academic performance, we made a comparison on students' academic performance and their cognition on the importance of employment ability and the abilities they have. In general, the ability that student thinks important doesn't match with their ability acquired. As can be seen, the ability that student thinks important mainly lies in practical aspect while the ability that student has is mainly lies in consciousness and concept aspects. This may be related to the cultivation of students in college. Students get a lot of edification from the classroom for personal accomplishment, while their practical ability requires students to seek opportunities to exercise.

Specifically as can be seen from "Table III", female's academic performance is directly proportional to their cognition on the importance of ability and the ability she has.

The better their academic performance is, the higher the score on the importance of employment ability is and the higher evaluation on her ability is; while for females, the score of their academic performance is not completely positively related to their evaluation on the importance of their employment ability and own ability, but the U-shaped correlations are presented. Taking "top 30%" as the boundary, the students with better academic performance get higher scores and the evaluation scores of students with poor academic performance is also increasing. This may be relevant to social expectations of different genders. Male's social expectation is to support the economic source and it also stimulates partial males seek for other way to increase their individual ability score in addition to obtain leaning and logic analysis abilities by learning in school.

TABLE III. GENDER DIFFERENCE IN THE LEARNING ABILITY AND LOGIC ANALYSIS ABILITY OF STUDENTS HAVING DIFFERENT ACADEMIC PERFORMANCES

Academic performance	Three most important employment ability	Extent of importance		Three most prominent abilities of college student	Ability possessed	
		Male	Female		Male	Female
Top 5%	Practical ability	4.371	4.462	Professional responsibility consciousness	4.052	4.181
	Teamwork ability	4.351	4.408	Professionalism	4.091	4.175
	Problem solving ability	4.347	4.457	Positive optimism	4.022	4.072
Top 10%	Practical ability	4.275	4.383	Professional responsibility consciousness	3.938	4.106
	Teamwork ability	4.213	4.315	Professionalism	3.903	4.109
	Problem solving ability	4.216	4.357	Positive optimism	3.860	4.007
Top 30%	Practical ability	4.28	4.348	Professional responsibility consciousness	3.885	4.032
	Teamwork ability	4.197	4.37	Professionalism	3.895	4.007
	Problem solving ability	4.28	4.324	Positive optimism	3.830	3.987
Top 50%	Practical ability	4.303	4.339	Professional responsibility consciousness	3.955	4.002
	Teamwork ability	4.239	4.347	Professionalism	3.962	3.962
	Problem solving ability	4.355	4.337	Positive optimism	3.924	3.892
Other	Practical ability	4.496	4.332	Professional responsibility consciousness	3.946	3.915
	Teamwork ability	4.335	4.296	Professionalism	3.951	3.874
	Problem solving ability	4.326	4.242	Positive optimism	3.996	3.852

IV. CONCLUSION

In this research, we made an investigation on students' cognition on their employment ability and self-employment ability by investigating the employment ability cognition and gender difference of college students and making longitudinal and horizontal comparison on genders and get a deeper understanding of college students' employment ability.

Firstly, male's employment advantage is more in his analysis ability in manner of rational thinking, while female's employment advantage lies more in empathy ability in manner of perceptual thinking. This also reveals that in the employment cultivation system of colleges and universities, firstly it is necessary to "draw on each other's strength" in long-term cultivation stage, correct and cultivate different personality traits of different gender of students, so that they can be greatly improved in employment ability over a long-term learning process. Secondly when students are in peak period of job hunting, colleges and universities should "strengthen their advantages and avoid their disadvantages" to give full play to students' existing ability to help them find a job that is more suitable for individuals and more capable of playing their personal ability advantage.

Furthermore, female college graduate is easier to aware the importance of employment ability. This is inevitably relevant to the employment discrimination that the society given to females. Therefore relevant department is expected to take multiple aspects into consideration in formulating policy for helping reducing employment discrimination on females so as to avoid getting opposite effect. For example, some provisions on reproductive rights of female protects the rights and interests of female in one hand, but it also causes employer to take additional consideration in selection of gender when counting the cost and yield of labors.

Finally, no matter male and female college graduates, their cognitions on importance of employment ability are both possibly unmatched with the ability that they have in aspect of cultivation of employment ability. College graduates' employment ability cognition scores are all higher than self-competence score, which indicates that college graduates have already had considerable cognition on the importance of employment ability but they are not appropriately cultivated in personal ability. This greatly affects students' self-evaluation construction and their occupational orientation and development. This is related to the problems in existing employment cultivation system of colleges and universities as well as individual consciousness of students and also inspires relevant department to early pay attention to cultivating the quality of being a labor to improve student's employment ability and further improve the overall employment quality.

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