
The Effect of Career Courses Guidance, Career Teachers Guidance, Knowledge Competition on Career Development among Higher Vocational Colleges Students in Guangxi

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Abstract

There are many factors affecting students' career ability in higher vocational colleges. Vocational skill training, especially vocational career cognitive training, is an important factor affecting the overall development of students in higher vocational colleges. The influencing factors of college students' career development ability and their improvement strategies are of great practical significance. The survey shows that college students are generally lack of career planning ability and weak professional cognitive ability. The organization and holding of vocational cognition competition has a positive influence on the vocational skill training of college students. Quantitative research method was adopted in this study. The "College Student Career Development Scale" will be used as a questionnaire to collect data. Simple random sampling method was used to determine the sample size. Guangxi Vocational and technical College students will participate in the questionnaire. Through correlation analysis and regression analysis, the collected data are analyzed to explore the influence of vocational cognitive competition activities on professional ability and career development of higher vocational college students. This study is of great significance to the academic research of vocational education and to fill the gap between education and employment. The research model provided can be used as reference for decision-making of career reform.

Keywords –Knowledge Competition, Career Ability , Career Development

I. INTRODUCTION

UNESCO pointed out in its report "jointly rethinking our future: a new social contract for education" released to the world on November 10, 2021: "the world is at a new turning point... Knowledge and learning are the basis of change and transformation. Educational transformation is imperative" (Shen Zuyun, 2021). In the overview of vocational education of OECD, it is pointed out that the penetration rate of Vocational Education in Germany, Finland, Switzerland and other countries has reached 70% (Shen Zuyun, 2021).

China has also entered a critical period of educational transformation (Zhao, M.,2019). In 2019, the State Council in China issued the notice on the implementation

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Received: 17th July 2023

Revised: 15th August 2023

Accepted: 5th September 2023

plan of national vocational education reform (The Ministry of Education, 2019), and in 2021, the general office of the State Council issued the opinions on promoting the development of modern vocational education (The Ministry of Education, 2019). China attaches unprecedented importance to vocational education and has made unprecedented efforts to promote the reform and development of vocational education. Cultivating technical talents with comprehensive ability and literacy has become an important reference index for vocational colleges to cultivate students (Liu, X.L.2021).

In the environment of more and more attention to vocational education, vocational colleges pay more attention to bringing vocational cognition and job cognition into the connotation of students' vocational core quality. On this basis, vocational colleges organize students to improve students' vocational cognition by increasing job internships or carrying out career courses. Higher vocational colleges need to grasp the input and output factors of vocational cognitive education to provide teachers and students with a more comprehensive and effective vocational cognitive path, so as to cultivate technical and skilled talents with comprehensive ability and meet the development needs of the national strategic level.

II.PROBLEM STATEMENT

Vocational cognition is very important for students in higher vocational colleges. It is the premise for students to clarify their vocational learning objectives. Zhou Weizhen (2009) and Ren Fuzhan (2013) investigated the career status of higher vocational students in different cities such as Jiangxi and Beijing, and found that students in vocational colleges generally have difficult problems such as lack of career cognition, unclear career objectives and lack of career cognition practice projects. As the country pays more and more attention to vocational education, the cognitive education of vocational education has also become the focus of academic circles at home and abroad in the past two or three years.

The existing research mainly focuses on three directions:

One is to explore the training strategies of professional cognition. Choosing the way of teaching determines the effectiveness of vocational education. Lin Xiaona (2019) built a model of experiential career counseling for career promotion of higher vocational students. Guangxi scholar Jiang Wenpei (2020) proposed the way of vocational cognitive competition to explore the optimal mode of vocational cognitive education. This exploration method is also the research object of this paper. Vocational competition refers to vocational cognitive competition, which was designed by Jiang Wenpei. The view of Guangxi scholar Jiang Wenpei is valued, which is to introduce a set of activity plans of professional standards and post work process into vocational

cognitive education. The contribution of vocational cognitive competition to the field of vocational cognitive education is fundamental and has the significance of reform and innovation.

Second, explore the impact of different educational elements on students and their specific action paths. Ren Fuzhan (2013) believes that college students' human capital investment has a great impact on College Students' career maturity. Regression weighting method and entropy weighting method are adopted. This paradigm provides a quantitative research model for the plight of vocational education of higher vocational students.

Third, with the gradual deepening of various theoretical development concepts, integrating psychological team consultation (Lin Xiaona, 2019), positive psychology (Chen Chen, 2015) and information processing theory (Wang benxian, 2013) into vocational education, and analyzing the impact of vocational cognitive education model under combination theory on teaching effect has become a new hot spot.

Although different researchers have different perspectives, the importance of vocational cognitive education has been widely recognized and accepted. But, There are still many deficiencies in college students' career adaptation and access to timely and practical employment information and resources (Yang Juan, 2018). Currently, there are common confusions and problems in college students' career guidance, and the students' serious lack of understanding for the latest competence requirements and for the professional quality requirements of enterprises, which leads to a low employment rate (Tang, M., 2021).

III.Theory and Research Hypothesis

3.1.Theoretical Foundation

The Social Cognitive Career Theory provides a fundamental framework for understanding individual personality and career behavior. It includes the Social Cognitive Career Theory, the "Holland's Vocational Personality" theory, and the Vocational Needs Theory. Bandura incorporated internal cognitive processes into behaviorist theory in his Social Cognitive Theory, emphasizing the role of cognitive factors in behavior modification and revealing the mechanisms underlying the formation and maintenance of human behavior (Bandura, A., 1977)[5].The Social Cognitive Career Theory views the entire process of career choice or decision-making as an interactive "person-environment-action" system: an individual's learning experiences are influenced by their personal characteristics and social background.

Among the interacting environmental and cognitive factors, cognitive factors play a dominant role, with self-efficacy and outcome expectations being the primary determinants of individual behavior. According to Bandura's definition, self-efficacy is

an individual's judgment of their ability to perform specific tasks, which results from the interaction of various external and internal factors, including the external environment, self-regulation mechanisms, personal abilities, past experiences, and achievements. This theory provides the theoretical foundation for this study, demonstrating that influencing individuals' cognitive and value-based perceptions of careers can, in turn, affect their career choice behavior. Additionally, individuals can develop cognitive perceptions and expectations regarding different careers, forming their own career goals and decision-making (Long, L., 2006)[6].

In summary, building upon career decision-making theories, the purpose of this study is to explore the critical factors and structural theoretical models of career decision-making. Additionally, it extends the research field of career identity and establishes a connection between career identity and career identification, which is beneficial for generating new research findings at the intersection of different fields.

3.2 Career guidance courses and Career Development Dimension

Career guidance courses such as Career Education and Guidance and Career Research help college students understand the requirements, development prospects and job market of different industries and occupations by providing all kinds of career information, as well as enabling students to understand their own interests, abilities and potentials (Yin Zhaohua, 2019). Jiang Wenpei (2020) designed the work process knowledge competition by returning to the profession itself and designing the complete process and evaluation indexes of the work process knowledge competition with occupational standards and job specifications as the core content. This involves the top-level design of vocational programs. The career guidance centers of higher vocational colleges and universities formulate curriculum standards and syllabi, and actively interface with enterprises. Let students understand and master the relevant standards and norms of enterprises in advance.

Based on the above analysis, this study proposes the following hypothesis:

H1. Career guidance courses have a significant positive effect on the career development of college students.

3.3 Teachers' vocational guidance and Career Development Competencies

Yang, Anlu. (2023) believes that one of the important responsibilities of career guidance teachers is to provide personalized career counseling to help students better plan their career development. Career counselors can guide students to establish the correct career concepts so that they can better adapt to the workplace society.

Professional instructors will guide students to adapt to the world of work by providing personalized career counseling.

Professional instructors will guide students to adapt their career orientation and career planning according to their majors. Finally, through an applicable vocational cognition training strategy, it is widely implemented in Guangxi. As an applicable vocational cognition training strategy, it is widely implemented in Guangxi and welcomed by the majority of students.

Based on the above analysis, this study proposes the following hypothesis.

H2. Teachers' vocational guidance has a significant positive effect on college students' career development ability.

3.4 Work Process Knowledge Competition and Career Development Dimension

Career cognition includes self cognition, career prospect, career development, talent demand, etc. (Chen Yu, 2011). Li Zhuofen (2017) believes that career cognition is an individual's evaluation of self, career itself and career development trend in the career world, which is generated by three basic ways: personal career experience, alternative career experience and observing others' professional behavior.

Working process knowledge was the concept originated from German "arbeitswissen", which was first proposed by Kruse in 1986. Later, the European research project "working process knowledge in technology and organizational development" expanded the definition of working process knowledge and further analyzed the main characteristics of working process knowledge. At present, there are many definitions of work process knowledge, some of which are defined from the positive significance of work process knowledge, such as "work knowledge is a kind of knowledge that can improve productivity, be more effective and meet the needs of labor process" (Xu Guoqing, 2015); Some definitions directly describe the characteristics of work process knowledge, such as "work process knowledge refers to the understanding of the work process of an organization as a whole, which is the knowledge obtained by skilled workers from the work process they participate in and combined with the written knowledge obtained from off-the-job learning and other learning methods" (Felix laurel, Rupert McLean. 2017). Although the perspectives are different, these definitions are not much different on the whole. Their understanding of the connotation of work process knowledge is consistent, that is, work process knowledge is attached to the work process, which is the professional knowledge actually needed in the work process.

Working process knowledge is the most important content in career cognition, which is helpful for students' professional orientation. And its main tasks, and make up for the

lack of vocational enlightenment education (Fisher, 2008). Xu Han (2008) provides an in-depth discussion of how work process knowledge plays a role in vocational education and its impact on students' career orientation. Zhao Xin (2007) argued that examining vocational cognition and vocational education from the perspective of work process knowledge provides educators and students with valuable references to improve the practicality and employment orientation of education and to help students better orient themselves to their vocational roles.

Based on the above analysis, this study proposes the following hypothesis.

H3. Knowledge competitions have a significant positive effect on college students' career development ability.

3.5 Dimensions of Career Ability

The method of using the Career Development Scale for College Students is generally by means of a questionnaire. The target group of the survey is the group of college students, and the survey includes assessment indicators in the above-mentioned areas. The results of the survey can be used to assess the level of career development of college students and to provide career planning and development advice for college students. The Career Development Scale for College Students is a tool used to assess the level of career development of college students (General Literacy Writing Group, 2018). The dimensions of career ability are diverse. From the perspective of this study, only key dimensions are selected, including career information cognition and career ability .

Its specific content includes the following dimensions: career cognition: including the assessment of knowledge about the career, career interest, career values, etc.; career ability: including the assessment of skills, knowledge, experience, etc. that an individual has in the career field (Li Bixin, 2021). There are a total of 60 selected questions. The reliability of the scale is high, the Cronbach's alpha coefficient of each dimension is above 0.70, and the Cronbach's alpha coefficient of the whole scale is 0.92. The validity of the scale is better, and it can effectively distinguish college student groups with different career development levels. Therefore, the Career Development Scale for College Students is a reliable and valid assessment tool.

IV. Conceptual model of the study

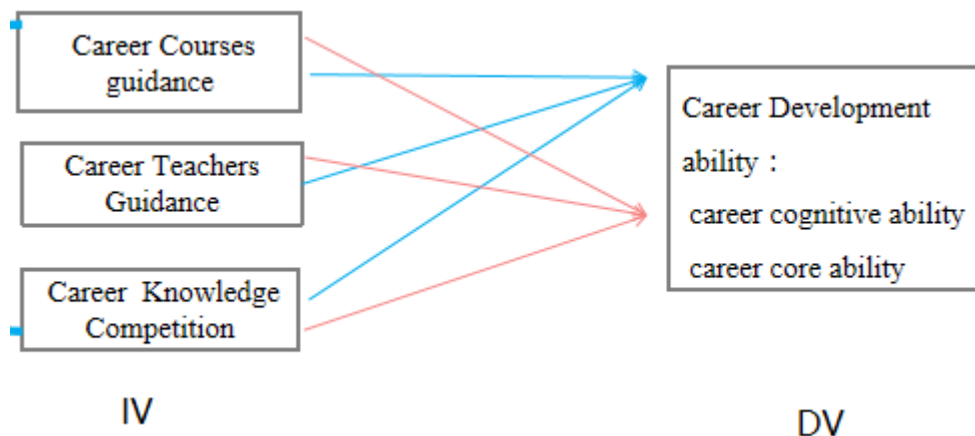
The Social Cognitive Career Theory provides a fundamental framework for understanding individual personality and career behavior. It includes the Social Cognitive Career Theory, the "Holland's Vocational Personality" theory, and the Vocational Needs Theory. Bandura incorporated internal cognitive processes into

behaviorist theory in his Social Cognitive Theory, emphasizing the role of cognitive factors in behavior modification and revealing the mechanisms underlying the formation and maintenance of human behavior (Bandura, A., 1977). The Social Cognitive Career Theory views the entire process of career choice or decision-making as an interactive "person-environment-action" system: an individual's learning experiences are influenced by their personal characteristics and social background.

Among the interacting environmental and cognitive factors, cognitive factors play a dominant role, with self-efficacy and outcome expectations being the primary determinants of individual behavior. According to Bandura's definition, self-efficacy is an individual's judgment of their ability to perform specific tasks, which results from the interaction of various external and internal factors, including the external environment, self-regulation mechanisms, personal abilities, past experiences, and achievements. This theory provides the theoretical foundation for this study, demonstrating that influencing individuals' cognitive and value-based perceptions of careers can, in turn, affect their career choice behavior. Additionally, individuals can develop cognitive perceptions and expectations regarding different careers, forming their own career goals and decision-making (Long, L., 2006).

This study examines the relationship between career guidance courses, career guidance teachers, career knowledge competitions and career competence and career development based on the "individual-environment-behavior" career decision theory. The independent variables are career guidance programs, career guidance teachers, and career knowledge competitions, and the dependent variables are career competence and career development. A conceptual framework is proposed to clarify the relationship between the variables. The specific performance model may be shown in Figure 1.

Figure1 Conceptual Framework



VI. Research Method

This study utilizes Quantitative research , also known as quantitative research methods, quantitative research methods, etc., which is one of the main methodological paradigms of positivist research. The size of the sample size involves various factors such as the condition of the overall population, the requirement of the sampling results for the inference of the overall population, the complexity of the research topic, and the amount of funding for the survey (Louis Cohen, 2018). However, in terms of sampling principle or sampling distribution, the sample size cannot be less than 30 units or elements. In statistics, samples larger than 30 units or elements are generally called large samples, and samples smaller than 30 are called small samples. The distinction between large and small samples with 30 as the boundary does not mean that 30 samples are large enough for sampling, but that the distribution of its mean can be close to a normal distribution only under the condition that the requirement of at least 30 samples is met (Louis Cohen, 2018). Selecting a reasonable sample size for prediction in a small area, this study selected 30 college students from a higher vocational college in Guangxi, and conducted a pre-survey with May 16, 2022 using field survey. The survey instruments were taken as career guidance course questionnaire, career guidance teacher questionnaire, work process competition questionnaire and career development ability questionnaire.

TABLE I.: QUESTIONNAIRE

variable	Research questions (selected partial questionnaire)	Measurement scale
Career course	The courses related to employment guidance can help me to make a correct self-evaluation. Relevant courses for employment guidance provide a comprehensive job competency description. The relevant courses of employment guidance introduce the basic situation of the occupation and its development trend.	Likert scale
Career instructor	Career instructors often give us classes or provide free career advice. Career instructors can help me to make a correct self-evaluation. Career instructors can provide a comprehensive description of job competence.	Likert scale

Work process knowledge competition	<p>Work process knowledge competition is a team competition, which can improve the teamwork ability.</p> <p>Work process Knowledge competition provides course training and professional teacher guidance.</p> <p>Participating in the work process knowledge contest can exercise my career information collection ability.</p>	Likert scale
Career development ability	<p>I am able to clearly evaluate my abilities and summarize my experience.</p> <p>I can accurately evaluate my ability and have the confidence to do my chosen career or job well.</p> <p>I know the basic situation of some professions, and I have a certain understanding of its development trend.</p> <p>I pay attention to the collection of recruitment information and employment policies in newspapers, magazines, television and the Internet.</p>	Career development Inventory(CDI)

On the basis of reliability test, data validity analysis of KMO (Kaiser-Meyer-Olkin) test and Bartlett spherical test before factor analysis.(Akhtar, 2016).Sampling adequacy measure (KMO) is an important indicator to measure the strength of the correlation between variables. The measure value was obtained by comparing the correlation coefficient and the partial correlation coefficient between the two variables, and the closer the KMO is to 1, the stronger the commonality between the variables is. In the preliminary study, the KMO values of the questionnaire options were analyzed, which were higher than 0.8, indicating that the study data were very suitable for extracting information (the validity from the side is very good).Bartlett Spherical test is based on the correlation coefficient matrix. Its null hypothesis is that the correlation coefficient matrix is an array of units, meaning that all elements of the diagonal of the correlation coefficient matrix are 1, and all elements on the off-diagonal are 0. The statistic of the Bartlett spherical test comes from the determinant of the correlation coefficient matrix. If the value is large and the corresponding concomitant probability value is less than the specified significant level, the null hypothesis is rejected, indicating that the correlation coefficient matrix is not a unit matrix and has correlation between original variables, which is suitable for factor analysis; otherwise, the null hypothesis is true and there is no correlation between original variables, which is not suitable for factor

analysis. When the KMO value was 0.844, the Bartlett spherical test reached a significant level ($p=0.000 < 0.001$). It indicates that the sample data are basically suitable for the factor analysis.

VII Results and Discussion

According to the results of the pre-survey, career guidance courses, career instructors and career awareness competitions have a positive impact on college students' career development ability. Specifically, career guidance courses can help college students understand their career interests, career values and career skills, and improve their career cognition; career instructors can provide personalized career guidance services to help college students make career plans and solve career confusions; and career cognition competitions can stimulate college students' career interests and enthusiasm for career exploration, and promote the depth of career cognition. This is in line with (Yin, S., 2019), Yang, Anlu. (2023), and Jiang Wenpei (2020) research conclusions.

Social cognitive theory suggests that individuals learn and develop their cognitive and behavioral styles by observing and imitating the behavior of others (Teal Cayla R, 2023). Therefore, career guidance courses and career instructors can provide opportunities for college students to imitate and learn from others to help them develop proper career cognition and behavioral styles. Career awareness competitions can provide college students with a platform for external support and feedback to help them better understand their career interests and values and develop appropriate career plans (Li Bixin, 2021).

To summarize, career guidance courses, career guidance teachers and career awareness competitions all have a positive impact on college students' career development ability. These results are consistent with related theories such as social cognitive theory and self-determination theory, and with the findings of previous studies.

VIII. CONCLUSION

Vocational development ability is the ability basis of higher vocational college students to complete the general post tasks in their vocational work. Organizing and mobilizing students to participate in vocational knowledge competitions will affect their career development ability to a certain extent. In order to cultivate students' professional ability, there must be organized professional knowledge competition activities to stimulate the promotion of college students' vocational development ability. In this case, it is very important for the career development of students in higher vocational colleges. China's vocational education is growing, but there is no study to make a comprehensive analysis of its roots. Through this study, the study will provide new clues for the analysis of vocational college students in the context of China. The sample is limited to 30 students, and lacks a broader scope for analysis. These aspects can be addressed in future research.

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