



The Study of Cognitive and Employability Diagnosis Factors for Supporting Role-Play Learning with Workshop Teaching Model in the Employability Diagnosis System

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Abstract

This study was a part of the ongoing research project developing a role-play learning with workshop teaching model using an Employability Diagnostic System to improve the employability of Chinese college students. Employment ability is a social issue that China currently attaches great importance to and a problem that local government departments and universities attach great importance. According to the survey results, students are presently aware of employment ability diagnosis. This research proposes two objectives: 1) To synthesis the factors of Social Cognitive and Employability Diagnosis. 2) To study the correlation of the Social Cognitive factors and Employability Diagnosis. This study used quantitative research methods to explore the impact of various factors in Social Cognitive Career development theory on students' Employability Diagnosis to support the construction of role-play learning and workshop teaching model based on Employability Diagnosis System. The study included a sample of a hundred students selected by using Simple Random Sampling and Purposive Sampling methods. The research instruments was a survey questionnaire. The results indicated that the Social Cognitive Career theory included five factors 1) Personal variable 2) Environmental variable 3) Learning experience 4) Human capital 5) Goal identification. The diagnosis of Employability had five aspects: 1) Job search motivation, 2) Job opportunity exploration, 3) Job performance, 4) Job search efficacy and 5) Monitoring and regulation. Furthermore, it was found that the five factors of Social Cognitive Career theory can have a positive correlation on the five aspects of students' Employability Diagnose is in every aspect, with a significant $>.05$, indicating that Social Cognitive and Employability Diagnosis factors could support and promote the development of role-play learning with workshop teaching model based on Employability Diagnosis System to enhance students' employability skills.

Introduction

The overall employment situation in China is improving, but it also faces many problems and

challenges. As one of the critical employment groups in China, the employment of college graduates is not only a key and difficult point in China.s employment work

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but also a focus and hotspot of social concern and a popular topic of current academic research. Jing, Ma, Wang, and M. (2022) pointed out that employment is the foundation of people's livelihood. Under the "new normal" of the economy, as economic growth decreases and employment pressure increases, stabilizing growth and employment are the main goals of macroeconomic policies (Liu & Wang, 2022). In the era of rapid development of the new economy it is significant to strengthen research and training on college students' employability skills, enhance their social competitiveness, and promote higher quality and fuller employment for college graduates. (Guo, 2021a) believes that every college graduate faces the most challenging graduation season. However, the current employment guidance models are primarily formal, superficial, and homogeneous, which cannot fundamentally improve students' employability. Personalized student needs urgently require precise guidance (Guo, 2021b). There is an urgent need to explore the factors that affect students' employability skill to improve the accuracy of analysis, prediction and diagnosis of students' employability skill.

In response to the issue of insufficient employability of students, many current studies have shown that their employability skill is influenced by the theory of social employment. This theory elaborates on the core driving mechanism and process of career choice. This theory is highly enlightening for people who lack interest, low self-efficacy and insufficient mobility (Guo & Wu, 2022). At the same time, employment is related to the development of various undertakings of the country, government and universities, affecting every family and student's development. Employment consists of obtaining excellent livelihood (Chen, 2019). Therefore, this study investigated the factors that affect the employability of fourth year undergraduates who will graduate from the Chinese Vocational College of Yunnan University of Finance and Economics in southwestern China. The main reason for selecting the Chinese Vocational College of Yunnan University is based on the researchers who are currently employed at the school and are responsible for employment work at the college. The researchers are responsible for teaching courses related to employment guidance and the teaching targets are undergraduates in their third and fourth years, which facilitates research and teaching practice. In addition, they have discovered problems such as insufficient employment ability of students in their teaching practice.

It is possible to use Social Cognitive Career theory to analyze and diagnose students' employability skills. Employability Diagnosis can give each student a test and a personal diagnostic report. Teachers can timely grasp the student's evaluation situation, view the student's employability situation, employability diagnosis diversion labels and download student reports. Students can use Employability Diagnosis to understand their problems, gaps, strengths and weaknesses. Teachers conduct targeted teaching design through employability assessment reports to improve teaching efficiency, enhance teaching effectiveness and accurately guide students in improving their employability skills.

There is theoretical research on employability skills, but more empirical research is needed. There is still a certain degree of subjectivity in the research on factors affecting employability and improvement strategies, hence a need for empirical research and data support (Liu, 2021). Based on the urgent need to improve college students' employability skill, this study focused on the relationship between social cognitive career development theory and employability diagnosis to support role-play learning with workshop teaching models based on the Employability Diagnosis System to enhance students' employability skills. Through this model's learning, students can find the root cause of their employability problems such as receiving precise employment guidance that could fundamentally improve their employability skills (Chen, 2019).

Objectives

- 1) To synthesis the factors of social cognitive career theory and employability diagnosis.
- 2) To study the correlation of the social cognitive career theory factors and employability diagnosis.

Literature review

Social Cognitive Career Theory

The social cognitive career theory originated from Albert Bandura's Social Learning Theory (SLT) in the 1960s. It developed into SCCT in 1986 and assumed continuous interaction between individual cognition, environment and behavior, which formed a "ternary reciprocity" (Chen, 2023). SCCT is one of the classics in the field of social psychology, widely used to understand changes in human behavior such as education, business, health psychology, public health, mass communication.

The core viewpoint of SCCT is the ternary

interactive determinism, which means that an individual's cognition, environment and behavior are determined and interact with each other (Guo & Wu, 2022). 1) In personal factors, self-efficacy refers to an individual's subjective perception of their beliefs and abilities to complete a specific activity. Simply put, it refers to an individual's judgment of their ability and confidence to achieve a specific goal. Self-efficacy may be influenced by four determining factors: performance achievement, substitute experience, verbal persuasion, and physiological state. 2) The expected outcomes in behavioral factors refer to the individual's anticipation of the possible outcomes and feedback that may arise from performing a certain behavior such as material rewards, sensory experiences, spiritual rewards. If a person believes that similar success can be achieved by imitating the behavior of others, they will be motivated by the expected outcome. 3) The impact of environmental factors on individual behavior may come from social and family support. In addition, SCCT also considers the motivation and expectations that an individual's past experience may affect their behavior.

identification. Employability diagnosis takes the job search process as a clue, starting from a series of processes such as clarifying job search intentions, job analysis, resumes, interviews used as the inventory for the students' job search behavior (including the frequency and intensity of behavior) (Zheng, Zhang, & Ban, 2023).

Employability skill

The concept of employability skills was first proposed by British economist Beveridge and became a popular research topic in the field of human resource management in European and American countries in the late 1950s (Jing, Ma, Wang, & M., 2022). Prior research has pointed out that Chinese scholar Zheng Xiaoming believes that the employability skills of college students refers to their ability to achieve employment ideals, meet social needs and realize their own value in social life through the learning of knowledge and the development of comprehensive qualities (Chadha & Toner, 2017). Based on the current employment situation in China and the employment problems encountered by students in practical work, researchers have generally agreed with Huang and Wei (2019) on the classification of college

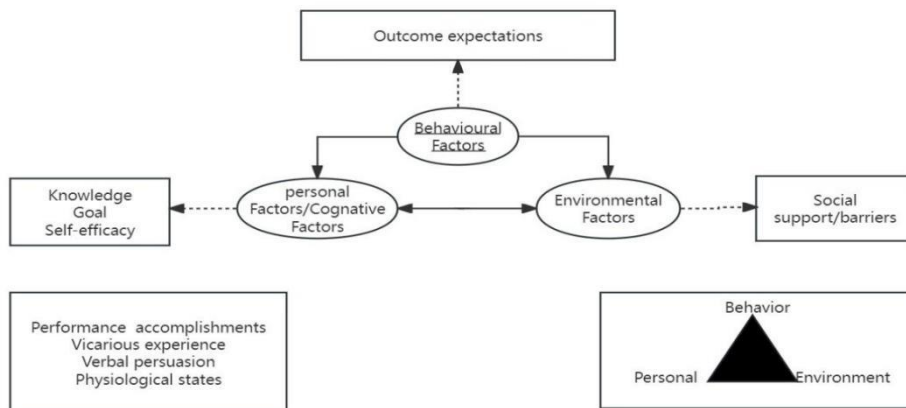


Figure 1 Social Cognitive Theory Model, sourced from Social Marketing and Public Health: A Literature Review

Employability diagnosis

Employability diagnosis is the analysis of factors that affect employment success and then combined with job search behavior for inventory. Through preliminary literature analysis and combined with the process of employment guidance and consultation, the five major factors that affect college students' employment are summarized as personal variables, environmental variables, learning experience, human capital and goal

students' employability skills. Based on the theory of competency models, employability skills is classified from motivation, traits, skills and abilities as well as a set of behavioral characteristics required by specific job positions or levels. For example, at the motivation level includes emotional regulation ability; at the characteristic level includes interpersonal communication ability and at the skill level: professional technical ability. The ability level includes, the ability to apply for a job and

the self-development ability. The five dimensions of abilities do not exist in isolation, but rather interact to form a system of employability for college students, jointly achieving a smooth transition from campus to the workplace.

Based on recent research, it was found that from 2017 to 2018, a majority of prior research papers analyzed the current situation, reasons, and proposed theoretical countermeasures and suggestions, but lacked practical empirical research. Since 2019, a few research designs have placed more emphasis on practice, but there is still a lack of empirical research. Starting from 2020, the research perspective became more innovative, comprehensive, and diverse, with some researchers building their own models based on previous research models being a highlight and a need for further learning and improvement in subsequent research. For example, Jing, Ma, Wang, & M. (2022) studied the construction of a model, developed a platform and used media to enhance college students' employability skills. Chen (2023) used employability skill as the dependent variable and used the secondary indicators of education process diagnosis and learning process diagnosis as independent variables to establish a multiple linear regression model. Building models to improve the employability skills of college students is currently a hot research topic.

Conceptual framework

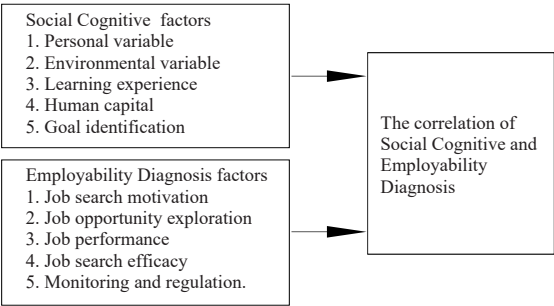


Figure 2 Conceptual framework

Research methodology

1. Population and samples

The research population were selected from China Vocational College, a college affiliated with Yunnan University of Finance and Economics in southwestern China. Students were selected for this study by using

Simple Random Sampling and Purposive Sampling methods. A total of 100 students majoring in e-commerce from the Business Administration Teaching Department of Zhonghua Vocational College of Yunnan University of Finance and Economics were selected as the sample size for the study. The participants were all from the same school, grade, and same age group but different major, Non university or college students are not included in the scope. Researchers contacted the sample population through work learning group notifications, personal visits to classrooms and dormitories for publicity, and relying on course teaching methods.

2. Research instrument

This research used a survey questionnaire, which consisted of two parts. The first part was a self-evaluation questionnaire around the five factors that affect students' employability in the theory of social cognitive career development. The second part was a self-assessment questionnaire from the perspective of Employability Diagnosis, focusing on the relevant factors that affect students' employability skills. Reflected by 10 descriptive items with 49 questions and used the Likert scale scoring method ("1" to "5", with "1" representing complete non-compliance, "2" representing non-compliance, "3" representing non-compliance, "4" representing compliance, and "5" representing very good compliance). Then approval of the tool by IOC experts was conducted and modified by IOC experts (IOC value is 0.67-1.00).

3. Collection of data

This study distributed questionnaires through the Questionnaire Star platform on WeChat in September 2023. A total of 100 senior students participated in the survey, including 43 males and 57 females; Among them, two had uncertain employment intentions and three did not engage in the business management industry, and the rest of the students planned to engage in the e-commerce industry. Therefore in the data analysis the two uncertain or non engaged participants in the business management industry were excluded. The final number of participants was 98.

4. Data analysis

Analysis data by using Mean and Standard Deviation, by using correlation analysis (Pearson Product Moment Correlation Coefficient) to predict the relationship between Social Cognitive factors and Employability Diagnostic factors for supporting a role-play learning with workshop teaching model in the Employability Diagnostic System.

Results

Research results of the synthesis of Social Cognitive and Employability Diagnosis factors

This study is based on the authoritative career theory with social cognitive, combined with the actual employment process of university students and guided by the Social Cognitive Career development theory, designs an Employability Diagnostic model from five dimensions: 1) Personal variables 2) Environmental variables 3) Learning experience 4) Human capital and 5) Goal identification that affect employment success with five factors: 1) Job search motivation 2) Job opportunity exploration 3) Job performance 4) Job search efficacy 5) Monitoring and regulation. Both of two concept combine the connection in Figure 3.

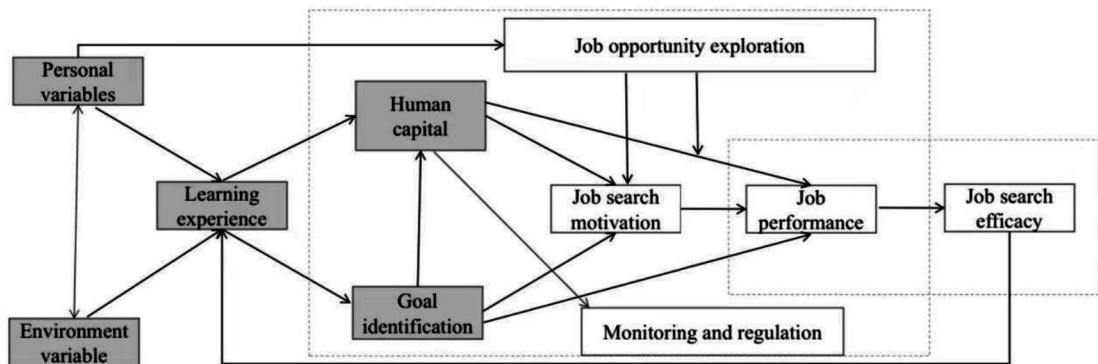


Figure 3 Social Cognitive and Employability Diagnosis elements

According to the theory of the Employability Diagnostic concept, the employment situation of college students is influenced by individual and environmental variables, learning experience, human capital and goal identification

Individual variables represent various factors such as gender, physical condition, personality traits and abilities. Personality traits play an important role in an individual's job search process, adaptation to the workplace environment, and career development in future work. Including initiative, sense of responsibility, self-confidence, resilience and a sense of control. These characteristics are relatively stable and can be changed through long-term intervention.

Environmental variables represent factors such as the individual's school, family background, employment environment and social network.

Learning experience includes all the experiences

of an individual in their previous lives. Including professional knowledge, professional abilities, practical internship experience, etc.

Human capital includes an individual's innate characteristics and the shaping of the environment that influence their interpretation of past experiences. Even with the same experience, different individuals have different feelings.

Goal identification is an individual's gradually clear and stable understanding of their professional interests, talents and goals. Including professional identity and clarity of job search objectives. Individuals with a high level of goal identification have a clearer and more stable understanding of themselves and their profession, thus having a higher sense of job search self-efficacy.

Introduction to the Employment Diagnosis concept. Individuals with high goal identification have clear job search goals/directions, therefore they have stronger job search intentions and exhibit higher focused and effective job search behaviors. Job search self-efficacy affects job search goals and behavior. A job search goal that is consistent with self-efficacy can stimulate job search motivation, increase job search intensity and effort. Environmental variables before employment, such as perceived economic pressure, employment environment pressure and the pressure of others such as parents, can affect self-efficacy, job search goals, and job search behavior. Job search behavior includes two stages: job preparation and job action. The preparation period includes information collection and evaluation (including utilization of social relationships, information collection strategies), preparation for economic expenses and job search time. The action

period includes the production and sending of resumes, written interviews and psychological adjustments (including the use of social support and emotional control.). The positive and effective nature of job seeking behavior directly affects the outcome of job seeking. Job search results include successful employment, adaptation and maintenance of employment. Students' personal variables (KST), goal identification and sense of efficacy greatly affect their adaptation and development in the workplace.

Research results on the correlation of the Social Cognitive factors and Employability Diagnosis.

The research results shows the correlation of Social Cognitive factors and Employability Diagnosis with five factors by following (SC1 - SC5):

From SC1-SC5, presents that the Personal variable has a positive correlation with job search motivation; Environmental variable has a positive correlation with job opportunity exploration; Learning experience has a positive correlation with job performance; Human capital has a positive correlation with job search efficacy; Goal identification has a positive correlation with monitoring and regulation, showing a significant $> .05$.

Discussion

Based on the research objectives, the above research results are discussed as follows:

Discussion on the synthesis of Social Cognitive and Employability Diagnosis.

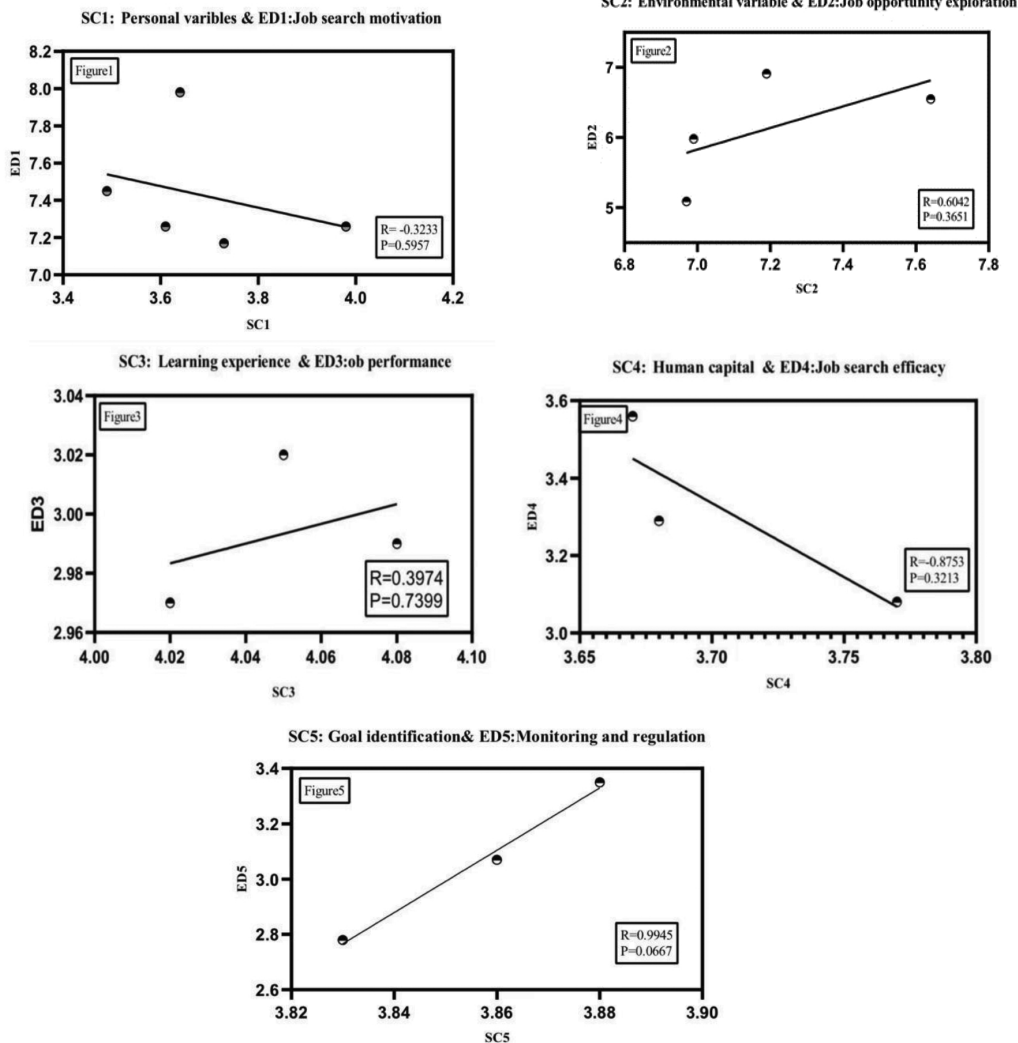


Figure 4 The Correlation of Social Cognitive factors and Employability Diagnosis with five factors

The social cognitive mainly includes five elements: personal variables, environmental variables, learning experience, human capital and goal identification. These five factors interact to influence students' job search motivation, job search behavior and job search results. This is consistent with the research findings proposed by Chen (2023), and Guo and Wu (2022) that individuals' cognition, environment and behavior are interdependent. The Employability Diagnostic mainly includes five elements: 1) Job search motivation 2) Job opportunity exploration 3) Job performance 4) Job search efficacy 5) Monitoring and regulation. It can be related to Forson, Ofosu-Dwamena, Opoku, and Adjavon (2021) findings that employee motivation factors were significant predictors on job performance. These five aspects interact to influence students' job search motivation, job search behavior and job search results. The Employability Diagnosis mainly includes: "diagnosis diversion intervention", which is equivalent to collecting various aspects of data to form a virtual "data center" that truly reflects "we understand students". Diversion is equivalent to triage, guiding students with different needs into targeted resources. This is consistent with the research conducted by Cao and Yi (2020), which analyzed the current problems in information accuracy and proposed a structured competency model for students and employers. Based on the problems in ability accuracy, specific steps were proposed to achieve ability accuracy. This Employability Diagnosis was similar to Zheng, Zhang, and Ban (2023) that Employability Diagnosis can provide students with precise employment guidance.

Discussion on the correlation of the Social Cognitive factors and Employability diagnosis

Discussion on the Correlation between Individual Variable Factors and Job Seeking Motivation

The personal variable factors in the Social Cognitive Career theory between Individual Variable Factors and Job Seeking Motivation are positively correlated. Personality traits such as responsibility, self-confidence and resilience in personal factors can affect students' employability skills, enabling them to face gender issues in the job hunting process and actively respond. This will encourage students to carefully consider their interests and preferences and explore their personality through cognition. This is consistent with the viewpoint proposed by Guo and Wu (2022) that personal factors can affect self-efficacy. This is also consistent with Zheng, Zhang, and Ban (2023) that

Employment motivation can effect students individual behavior.

Discussion on the correlation between environmental variable and job opportunity exploration.

The research results on the correlation between environmental variable and job opportunity exploration showed that there is a positive correlation. The school, family background, employment environment and social network relationships in environmental factors can affect students' employability skills. The school they attend has a certain level of popularity, providing support for students to achieve their job search goals. This is consistent with the viewpoint proposed by Guo and Wu (2022) that environmental factors can affect the motivation and expectations of individual behavior. This is also consistent with Zheng, Zhang, and Ban (2023) that the impact of social environment on student job search information acquisition.

Discussion on the correlation between learning experience and job performance

The research results on the correlation between learning experience and job performance showed that there is a positive correlation. Professional knowledge, abilities and practical experience in learning experience can affect students' employability skills. This is consistent with the viewpoint proposed by Guo and Wu (2022) that environmental factors can affect the motivation and expectations of individual behavior. This is also consistent with the statement made by Forson, Ofosu-Dwamena, Opoku, and Adjavon (2021) that "academic self-efficacy among college students has a positive impact on their employability skill".

Discussion on the correlation between human capital and job search efficacy

The research results on the correlation between human capital and job search efficacy showed that there is a positive correlation. The shaping of the environment can accumulate human capital for students, thereby enhancing their employability and prompting them to improve their current knowledge and ability levels to be competent in future jobs. This is consistent with the viewpoint proposed by Guo and Wu (2022) that the impact of environmental factors on individual behavior may come from social support and family support. The research findings are supported by Cheng (2023) statement that "college students are influenced by factors such as self-efficacy satisfaction, interest orientation, employment willingness and these influencing factors are transformed into the ability to continuously improve their personal employment level."

Discussion on the correlation between goal identification and monitoring and regulation

The research results on the correlation between goal identification and monitoring and regulation showed that there is a positive correlation. Enhancing career identification is beneficial for career development and can help students further clarify their career development direction. This is consistent with the viewpoint proposed by (Zheng, Zhang, & Ban, 2023) that enhancing students' professional identity is beneficial for students to further clarify their career development paths. At the same time, Xu and Wang (2023) proposed that "higher resilience can enable college students to maintain a positive and proactive attitude when facing setbacks, better cope with difficulties and challenges such as fierce competition in the job market, interview failures, and work pressure, and learn from failures, quickly adjust and adapt, continue to work hard, and seek new development opportunities, which also provides support for the above research results.

Discussion about the strength and further points for future development

Research has founded that the Employability Diagnostic includes five elements: 1) Personal variables, 2) Environmental variables, 3) Learning experience, 4) Human capital and 5) Goal identification, which can effectively predict the employability skill of undergraduates. This study adopted correlation analysis and the results showed that all five variables had a good predictive effect on students' employability skills. This result is consistent with (Chen, 2023; Guo & Wu, 2022). Through the use of the Employability Diagnostic model based on the "diagnosis diversion intervention" mindset, it has been proven that after using the Employability Diagnostic model, students have a clearer understanding of their own employability skill status, identify problems in various aspects and have a clearer understanding of what types of employment counseling and guidance are needed. Teachers can also provide more accurate practical training for students based on the employment ability diagnostic results. This is consistent with the use of EDP as a diagnostic tool proposed by Chen (2019), which can help college students identify their employability skill development needs. The five factors of social cognition and the five factors of Employability Diagnosis proposed in this study have a positive correlation, jointly affecting the employment ability of students. This provides a solid theoretical research foundation for further exploring more comprehensive

Employability Diagnostic tools to systematically measure the employability skill of graduates in the future. Zheng, Zhang, and Ban (2023) proposed that "students can use Employability Diagnosis to understand their own problems, gaps, strengths and weaknesses. Teachers can use employability skill assessment reports to design teaching in a targeted manner, improve teaching efficiency, enhance teaching effectiveness and accurately guide students to improve their employability skill", which confirms this research result.

Suggestions

The results of this study can be used by students to: 1) Stimulate personal reflection awareness and understand their strengths and weaknesses in the job search process; 2) Make more targeted use of the employment guidance resources provided by the school, ultimately achieving the effect of improving personal employment success rate and employment quality. For schools: 1) Provide targeted resources for students who want to apply for jobs; 2) Evaluate the effectiveness of the employment counseling resources provided by the school; 3) Ultimately make employment guidance work more efficient and effective.

1. In future research, more comprehensive employability diagnostic tools should be studied to support role-play learning with workshop teaching model based on Employability Diagnostic System to improve the employability skills of college students.

2. This study has certain limitations such as the small sample size and insufficient representativeness.

3. In the next stage of research, other suitable measurement tools will be explored and the sample will be expanded to systematically measure the employability skills of undergraduates.

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