



THE DEVELOPMENT OF A ROLE-PLAY LEARNING WITH WORKSHOP
TEACHING MODEL BY USING EMPLOYABILITY DIAGNOSTIC SYSTEM
TO ENHANCE EMPLOYABILITY SKILLS FOR BUSINESS
ADMINISTRATION UNDERGRADUATE STUDENTS IN CHINA

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THE DISSERTATION TITLED

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BY

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The purposes of this research are as follows: (1) to study the conditions and requirements of model; (2) to develop a learning model; (3) to study the effectiveness of model and (4) To confirm the form of model. This research divided into four phases. The sample was 50 undergraduate students of business administration and five model experts. The research tools were a needs survey, semi-structured interviews, a graphic model, a lesson plan, an employability test and the student satisfaction survey and model form confirmation evaluation. Data analysis used frequency, PNI, mean, SD, dependent t-test, and correlation. The results found that the role-play and workshop teaching model had eight components (1) roles; (2) learning environment; (3) teaching media for learning activities; (5) the teaching process; (6) teaching strategies; (7) evaluation test; and (8) feedback. The five teaching processes were extracurricular content; (2) in-class activities preparations; (3) course content learning; (4) learning content summary; and a (5) learning effectiveness test. The students had significantly higher employability test scores ($p < 0.05$) and very satisfied level (Mean=4.30, SD=1.289).

Keyword : Employability Diagnostic System, Role-play learning, Workshop teaching, Instructional design, Employability skill, Learning effectiveness

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CHAPTER 1

INTRODUCTION

Background

At present,China's employment situation is improving on the whole,but it also faces many problems and challenges. As one of the key employment groups in China, the employment of college graduates is not only the key and difficult point of China's employment work,but also the focus and hotspot of social attention and the current academic research.(Wang,2018)pointed out that employment is the foundation of people's livelihood.Under the "new normal" of the economy,economic growth has declined and employment pressure has increased.Maintaining stable growth and employment are the main goals of macroeconomic policies.(Zhang,2020)In the period of rapid development of the new economy,it is of great significance to strengthen the research and training of college students' employability and enhance their social competitiveness to promote higher quality and fuller employment of college graduates. (Chen,2021)believes that every college graduate is facing"the most difficult season for employment",and "employment" is the foundation of people's livelihood.College students' employment is a hot issue concerned by schools, universities and the society. College students belong to the first group of employment, college students must obtain income through employment, achieve survival, and seek personal growth and development.Therefore, we must attach great importance to the employment of high-end talents gathered in higher education.Only by giving full play to the talents of these high-end and professional talents can we better replace old growth drivers with new ones and promote sustained and sound economic development.

In the post-epidemic era,the employment guidance of college students faced great challenges(Zhao et al.,2022).It was clear that the traditional employment and entrepreneurship course teaching mode was no longer applicable to the post-epidemic era.(Yuan,2022)believed that most of the traditional employment guidance models in colleges and universities were not systematic,some of them were mere formality,and could not substitute for students' experience,which could not meet students'

employment needs well. In the post-epidemic era, which was relatively controllable, how to balance online and offline education also became a new topic that needed to be urgently solved in employment and entrepreneurship courses (Zhao et al., 2022). Therefore, colleges and universities needed to update the employment guidance service model, effectively consider the needs of students, improve the employment guidance work methods, and effectively provide students with experiential and situational employment guidance. (Wang, 2020) believed that the concept system of social role theory was close to real life and had good explanatory power, which made it not only valued by social psychology but also highly valued by researchers in sociology, anthropology, management, education, and other fields. In the follow-up study, the researcher tried to use the role play-based learning theory in the social role theory to make a deep exploration of the construction of the role-play learning and workshop teaching model based on the employability diagnostic system in the post-epidemic era to promote the employability skills of college students. The purpose of discussing how to use technology to support the effect of learning was to provide students with opportunities based on games and interesting scenes to promote their familiarity with the job market, so as to obtain a positive professional experience during the school transition.

New changes in the teaching methods of higher education in the post-epidemic era: (Zhong & Nan, 2021) pointed out that advanced information technology represented by the Internet, Big data, artificial intelligence, virtual reality, augmented reality, and blockchain technology developed rapidly, and integration with education and teaching became a general trend. Educational information technology increasingly became a hotbed for educational innovation. The current speed of integration of information technology and education and teaching in society accelerated, the field expanded, and the degree deepened, providing important opportunities for theoretical and practical innovation in educational informatization. Therefore, in the post-pandemic era, the use of electronic learning tools should have paid more attention to practical design and further improved teaching mode design. For example, major universities should have

continuously explored and improved teaching design in teaching practice so that students could benefit more from the new employment guidance courses. Promoting the precise construction of employment guidance education information technology platforms was a good opportunity to improve the comprehensive quality of college students, posing challenges to students' self-learning ability and new requirements for teachers' information-based teaching in the new era.

Research background of related independent variables

In order to grasp the research trends in related fields, researchers conducted a survey on 50 articles from educational technology research and development journals related to educational technology in the past three years based on the topics of interest. By analyzing the dependent variables of the articles, it was found that the proportion of research on student skills is the highest, followed by a relatively large number of literature on teaching research, indicating that both domestic and foreign literature, Our overall focus in higher education is still on how to cultivate and develop students' certain skills by improving the quality of education and teaching, and innovating educational forms. The future society of the 21st century, especially in the post pandemic era, requires students to equip themselves with various skills. This study proposes the theme of cultivating and developing students' employability skills based on such a research trend, combined with the actual situation of students' lack of employability in the school where they work.

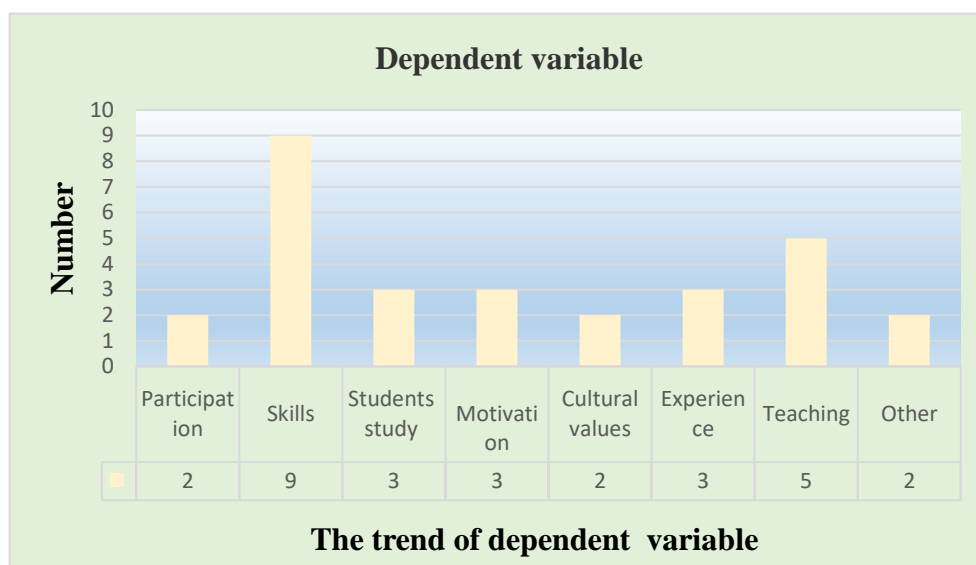


Figure 1 source is from the investigation and analysis of dependent variables of 50 articles on topics of my interest in educational technology journal "Educational Technology Research and Development 2023,2022,2021" in recent three years.

Research background of related independent variables

By analyzing the dependent variables of relevant literature research, it was found that there are many studies on the support of electronic learning environment for learning skill improvement. Due to the impact of the epidemic, higher education teaching worldwide has had to adjust its original face-to-face teaching methods and explore more diverse and innovative teaching methods. The teaching methods are gradually becoming electronic, digital, and mobile. There are 9 studies on e-learning environments, and this variable has attracted scholars' attention mainly for the following reasons: 1) role-play simulations can provide students with experiential learning opportunities. 2) Participating in game activities attracts students' learning attention, helps them learn in a more enjoyable way, and supports students in learning complex scientific phenomena through real-life graphics and interactions. 3) It is difficult for students to experience abstract concepts in daily life. There is relatively little research on

variables such as activities, online learning, knowledge construction, and factors. The reasons are as follows: 1) Preliminary research has matured; 2) The current situation of social development requires innovative research from an updated perspective;

The research trend summarized is that the application of e-learning and digital learning has been a hot topic in academic journal research in recent years. Based on the above research trends, researchers fully utilize modern educational technology platforms and explore the construction of interactive, experiential, situational, and gamified role-play learning and workshop teaching models using e-learning environments.

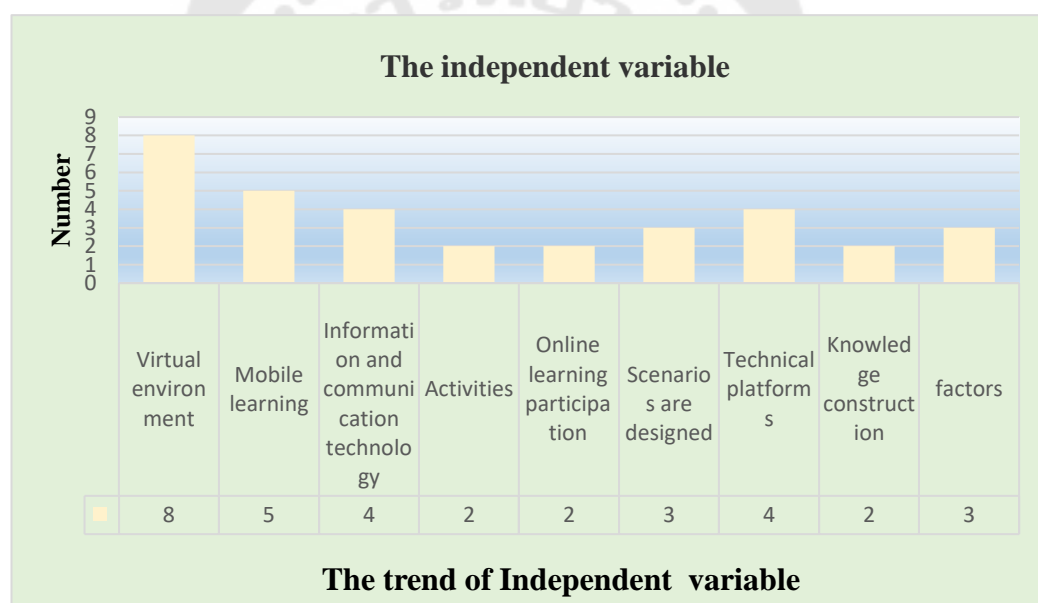


Figure 2 source is from the investigation and analysis of the independent variables of 50 articles on topics of my interest in educational technology journal "Educational Technology Research and Development 2023,2022,2021" in recent three years.

Research question

1.What are the components of a role-play learning with workshop teaching model,by using employability diagnostic system to enhance employability skills ?

2.What are the processes of a role-play learning with workshop teaching model,by using employability diagnostic system to enhance employability skills ?

3.What are the results of a role-play learning with workshop teaching model,by using employability diagnostic system to enhance employability skills ?

4.What are the form of a role-play learning with workshop teaching model,by using employability diagnostic system to enhance employability skills ?

Objectives of the study

1.To study the conditions and requirements of role-play learning with workshop teaching model,by using employability diagnostic system to enhance employability skills.

2.To develop a learning model of role-play learning with workshop teaching,by using employability diagnostic system to enhance employability skills .

3.To study the effectiveness of using a learning model of role-play learning with workshop teaching,by using employability diagnostic system to enhance employability skills.

4.To confirm the learning model form of role-play learning with workshop teaching,by using employability diagnostic system to enhance employability skills.

Significance of the study

This study is expected to be helpful in the following aspects:

1.College employment guidance teachers can use role-play learning with workshop teaching model as a teaching reference guide,and use employability diagnosis system as learning aids to promote the development of employability skills.

2.Relevant management personnel of employment and entrepreneurship departments in Chinese universities can use research results as guidance to apply role-play learning with workshop teaching model based on employability diagnosis system to daily employment management consulting services,in order to promote the improvement of students' employability skills.

3.Teachers of relevant courses in universities can apply the role-play-based learning with workshop teaching model developed by the employability diagnosis system based on the e-learning environment to the teaching design of other similar courses to enhance students' various abilities.

Researchers or anyone interested in promoting employability skill can gain knowledge from this study as a basis for future research.

From the aforementioned research, the researcher is therefore interested in studying the application of technology in combination with role-play learning and teaching workshops to promote the development of students' employment skills.

Scope of the study

The researchers divided the study into four phases.

PhaseI:Study the learning model conditions and requirements of role-play learning with workshop teaching,by using employability diagnostic system to enhance employability skills.

PhaseII:Develop a role-play learning with workshop teaching model,by using employability diagnostic system to enhance employability skills .

Phase III: Study the effectiveness of role-play learning with workshop teaching model, by using employability diagnostic system to enhance employability skills.

Phase IV: Confirm the form of role-play learning with workshop teaching model, by using employability diagnostic system to enhance employability skills .

The populations used in the phase I study

1. The population (students) studied in the first phase. The Chinese Vocational College, a college affiliated with Yunnan University of Finance and Economics in southwestern China, use employability diagnostic system technology to promote employability skills. According to the Yamane principle, the population is 625 undergraduate graduates. (Statistical data released on February 1, 2023). Graduates from four majors, namely E-commerce, Marketing, Secretarial Studies and Business Administration, from the Business Administration Teaching Department of China Vocational College, Yunnan University of Finance and Economics in 2020.

The samples used in the phase I study

1. Samples (students) for the first phase of research. According to the specific method. The study selected a sample size of 180 graduates from four majors in the Business Administration Teaching Department of the Chinese Vocational College of Yunnan University of Finance and Economics. The participants are all from the same school, grade, and age group; Non university or college students are not included in the scope.

2. Samples (experts) for the first phase of research. The samples used in the first phase of the study are consistent with the second and fourth phase. According to the specific method, including 5 model experts: 1 system evaluation expert, 3 model evaluation experts, 1 employability guidance teaching expert, with no less than 5 years of teaching experience and academic achievements in related fields.

The populations used in the phase II study

The population (experts) studied in the second phase. The population used in the second phase is consistent with the first and fourth phase, including system

evaluation experts, model evaluation experts, and employment ability guidance teaching experts.

The Samples used in the phase II study

Samples (experts) for the second phase of the study. The samples used in the second phase is consistent with the first and fourth phase. According to the specific method, including 5 qualified model experts: 1 system expert, 3 model experts, and 1 expert in employability improvement teaching. They also have not less than 5 years of teaching experience and academic achievements in related fields.

The populations used in the phase III study

The population (students) studied in the third phase. The Chinese Vocational College, a college affiliated with Yunnan University of Finance and Economics in southwestern China, by using employability diagnostic system to enhance employability skills. According to the specific method, The population is 625 undergraduate graduates. (Statistical data released on February 1, 2023).

The sample used in the phase III study

Samples (students) for the third phase of the study.

1) Sample (students) for the third phase of the study. According to the specific method. The research requires a total of 50 students from four majors in the Business Administration Teaching Department of Yunnan University of Finance and Economics, China Vocational College, as a try out sample size. The participants are all from the same school, grade, and age group; Non university or college students are not included in the scope.

2) According to the specific method. The research requires a total of 50 students from four majors in the Business Administration Teaching Department of Yunnan University of Finance and Economics, China Vocational College, as the sample size for the experimental group. These students voluntarily participate in all studies. The participants are all from the same school, grade, and age group; Non university or college students are not included in the scope.

The populations used in the phase IV study

The population (experts) studied in the fourth phase. The population used in the fourth phase of the study is consistent with the first and second phase, including system evaluation experts, model evaluation experts, and employment ability guidance teaching experts.

The sample used in the phase IV study

Samples (experts) for the fourth phase of the study. The samples used in the fourth phase of the study is consistent with the first and second phase. According to the specific method, including 5 model experts: 1 system evaluation expert, 3 model evaluation experts, 1 employability guidance teaching expert, with no less than 5 years of teaching experience and academic achievements in related fields.

Research variables

Variables of study

The study included the following variables:

Independent variable: The role-play learning and workshop teaching model.

Dependent Variables: Employability skills of business administration undergraduate students

Research Content (Research field) :

The study was researched and developed, and the researchers collected a large amount of qualitative data from the sample in order to find out. The materials used in this research are based on the teaching content of college students' Career guidance courses such as Career Development Planning for College Students, Career Development and Employment Guidance, Foundation of Entrepreneurship, Job Search Simulation Training and other courses set up by the university where the researcher works. The study units are divided into five parts, including: 1) Analysis of the recruitment mode of employers; 2) Decision-making of job objectives; 3) Job analysis of job objectives; 4) Self-marketing -- resume coaching; 5) Self-marketing -- interview coaching.

Definition of terms

Role-play learning. Role-play refers to a series of role-playing behaviors that individuals engage in based on their specific position, role expectations, and role norms. The three basic elements of a role include an individual's social status, the expectations of social development for individual behavior, and the individual's specific behavior patterns. This study proposes five role-play learning processes based on previous research: 1) role expectation; 2) role positioning; 3) role learning; 4) role practice; and 5) role-playing skills. Based on recent research, we found that role-play learning theory was very suitable for enhancing employability skills and had strong support. At the same time, using role-play theory as a learning strategy is suitable for allowing students to perform roles such as "job seekers" and "examiners" in the job application process, and allowing college students to use role-play learning strategies for pre-employment learning before entering the workplace. This can better help graduates adapt to the change from campus to the workplace as soon as possible.

Workshop teaching. "Workshops" are a self-learning method mainly based on public participation to enhance abilities. The workshop focuses on a specific topic and conducts thematic research, which has been widely accepted internationally and has become an important way of learning. Based on relevant research, this study proposes that workshop teaching mainly involves five processes: 1) theme setting; 2) activity design; 3) group division; 4) activity implementation; and 5) activity feedback and evaluation. Meanwhile, workshop teaching has four characteristics: 1) It involves group tutoring; 2) It involves individual counseling; 3) It is scenario based/simulation based; 4) It is interactive/experiential; The workshop focuses on a specific topic and conducts thematic research, which has been widely accepted internationally and has become an important way of learning. From this, it can be seen that workshops are suitable for teaching on career guidance courses and career counseling.

Employability Diagnostic System. The employability diagnosis system is the online system. This system is only intended for students from universities in mainland China. It mainly has ten functions: 1) Testing; 2) Report download; 3) Online

learning4)Assessment monitoring5)Assessment personnel information6)Overall employability viewing7)Diagnostic results summary 8) Class based export (download report)9)Diversion label statistics10)Viewing diversion labels.The employability diagnosis system has two main characteristics:1)The employability diagnosis system mainly evaluates based on eight factors that affect employment success, and conducts employability evaluation tests based on the employability diagnosis model theory; 2) 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, etc., to inventory students' job search behavior.Employability diagnosis can provide each student with a test and a personal diagnostic report.Teachers can timely grasp the student evaluation situation,view the student's employability situation, employability diagnosis diversion labels,and download student reports.Students can use employability diagnosis to understand their own problems,gaps,strengths,and weaknesses.Teachers use employment assessment reports to design targeted teaching methods,improve teaching efficiency,enhance teaching effectiveness,and accurately guide students in improving their employability skills.

Employability skills.This study proposed that "employability skill" was not only the combination of abilities and qualities required to obtain a job but also the ability to continuously develop after employment.From a micro perspective,according the current employment situation in China combined with the employment problems encountered by students in actual work,the employability of college students should include the following dimensions:

Firstly,the ability to apply for a job,including abilities such as self career planning,collecting and processing information,interview skills, and self decision-making.By analyzing the recruitment model of the employer, use relevant test forms such as 1)Job description2)Competency list3)Detailed introduction and examples of quality items to evaluate this ability;

The **second** is professional technical ability, including professional technical and practical application abilities. By teaching job search goal decision-making, evaluate this ability using 1) Employability Diagnostic Dimension Reference Table 2) Career Decision Balance Sheet and other related test forms;

The **third** is interpersonal skills, including communication skills, interpersonal skills, teamwork skills, conflict management ability and other behavior management abilities related to other people. Evaluate this ability through job analysis of job objectives, using tests such as 1) A list of professional values and 2) A comparison table of decision-making status;

The **fourth** is self-development ability, which includes self-learning ability, problem-solving ability, innovative skills, and other self-improvement abilities. By seeking self marketing - resume coaching for specialized training, and using tests such as resume self evaluation forms to evaluate this ability;

The **fifth** is emotional regulation ability, which includes cognitive ability towards society, cognitive ability towards oneself, and self-management ability, such as confidence, achievement motivation, sense of responsibility, perseverance, etc. By seeking self marketing - interview coaching specialized training, this ability is evaluated through tests such as 1) Collecting and predicting interview questions 2) Competency and achievement event checklist 3) Comprehensive quality interview evaluation form.

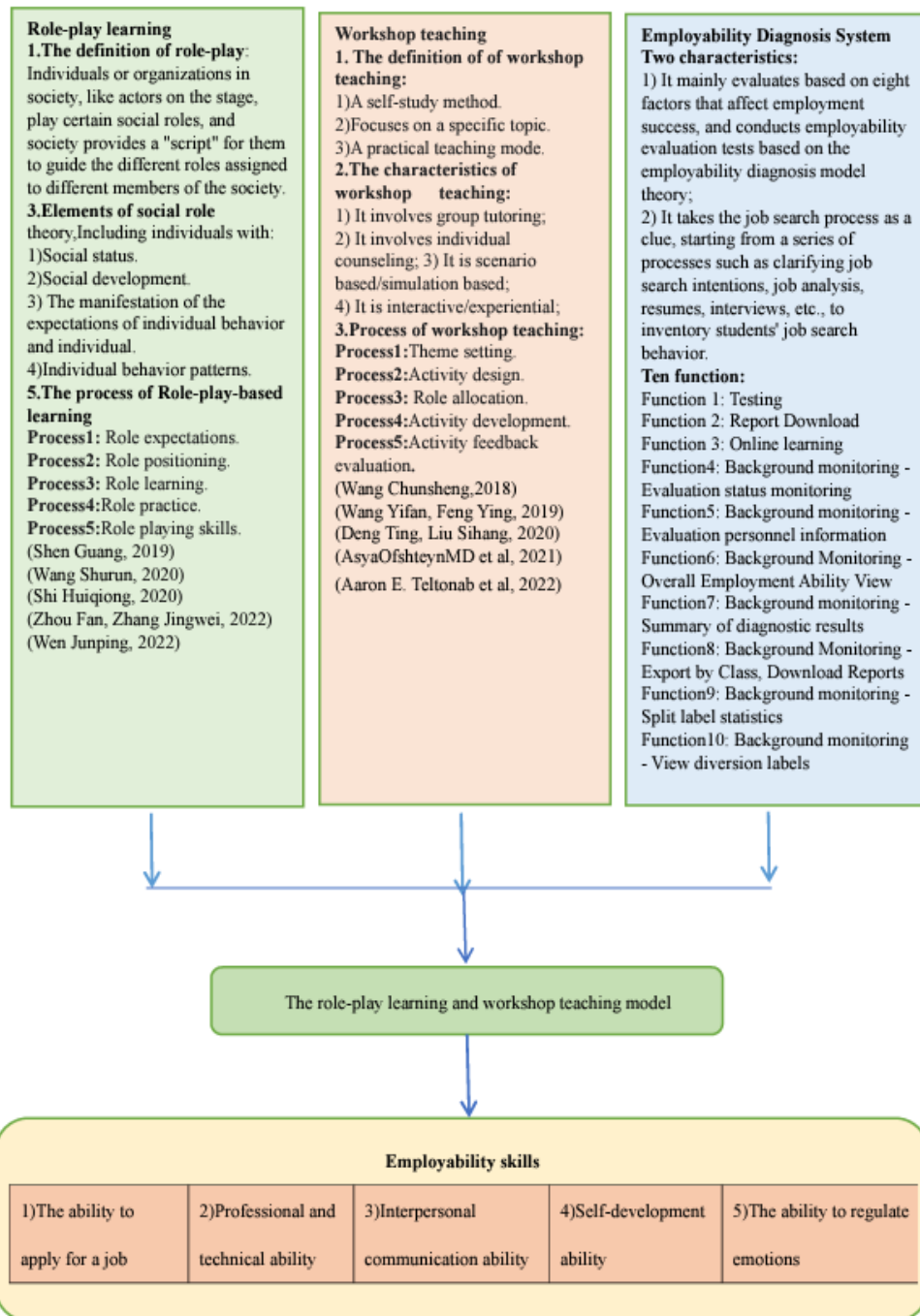
The five dimensions of abilities do not exist in isolation or simply accumulate, but interact with each other to form a system of college students' employability skills, working together to achieve a smooth transition from campus students to the workplace. At the same time, students' employability skill was measured by using the employability test through the Employability Diagnostic Systems, using a five level scale, it was the form of self-assessment.

The **role-play learning with workshop teaching model based on Employability Diagnostic System**. This study combine the five role-play learning processes with five workshop teaching processes. And combine the ten function of Employability Diagnosis System to enhance employability skills. The theoretical knowledge of this study will be

designed for teaching through the Employability Diagnosis System platform. The practical application mainly involves role-play and workshop ideas in teaching design. The role-play learning and workshop teaching models developed based on the Employability Diagnosis System are mainly used to enhance practical effectiveness testing, enable students to engage in experiential, situational, and interactive learning, consolidate theoretical learning effects, enhance professional training, and improve their employability. Overall, the construction of digital learning platforms, workshop teaching models, exploration of situational employment guidance course teaching practices, and the construction of employment ability enhancement models are still hot research topics. However, there is still relatively little research on using appropriate learning theories to combine digital learning, workshop teaching model, and situational learning environments to construct teaching models. Therefore, based on previous research, researchers will use the workshop teaching model to select role-play learning theories that are in line with the theme of employability. Relying on the school's existing integrated career assessment platform, employment guidance system, and rain classroom learning platform, combined with the digital and situational learning environment created by workshops and role-playing learning strategies, they will construct a learning model. Based on the eight factors that affect the success of college students in employment, they will improve their employability through employability guidance courses and practical activities.

Research Framework

The researchers applied elements and concepts from the role-play learning and workshop teaching model, by using employability diagnostic systems as the base of e-learning. In order to promote the employability of college students, researchers have formulated the following research framework:



Figures 3 The research framework

Description of Research Framework

The learning model takes the group as a unit, and uses situational, experiential and interactive role-play learning with workshop teaching model, as well as the employability diagnosis system based on e-learning environment throughout the whole teaching process before, during and after class, to implement "online and offline" hybrid Flipped classroom teaching.

Before class, the main task is to release preview courseware through Employability diagnosis system and arrange learning tasks for students to learn independently. Utilize employability diagnostic system to share viewpoints with all students through bullet screens and submissions, encourage students to think and choose through voting, and conduct on-site testing of students' theoretical knowledge learning effectiveness through single choice, multiple choice, fill in the blank, and other questions. Guide each group of students to discuss and test the effectiveness of pre class group learning through subjective questions.

In class, role-play learning with workshop teaching model are mainly used, with students as the main body and teachers as the lead. Case analysis, scenario simulation, game interaction, group discussion, inspiration and guidance are used for learning. Utilize workshops for consultation and guidance, use role-play learning to complete simulated interview learning tasks, and comprehensively test the effectiveness of knowledge and theory learning;

After class, the employability diagnosis system is mainly used for testing and evaluation. Based on the test results, comparative analysis is conducted to help students identify their own problems in a timely manner. Teachers can further improve teaching through problem gaps and provide more accurate guidance for students to enhance their employability skills.

CHAPTER 2

REVIEW OF THE LITERATURE

This chapter first mainly expounds the key concepts, theories and studies of previous research topics, and establishes the most important theories and concepts for my research project through comparison and contrast. The second is the relevant research of predecessors, to find the key debates and controversies, determine the conflict points, and position their own research position; Third, through the analysis of previous research, combined with the current reality and possible future trends, find out the existing gap, show what is missing in the existing research and how to deal with my research project, and make an overall summary. This chapter is divided into seven subsections.

1. Employability Diagnosis System

1.1 Definition of employability diagnosis

1.2 The Meaning of Employability Diagnosis

1.3 The elements of Employability Diagnosis

1.4 The process of Employability Diagnosis

1.5 Theoretical basis of Employability Diagnosis——Social cognitive

theory

1.6 The overall design of Employability diagnostic system

1.7 Conclusion

2. Workshop teaching

2.1 The meaning of Workshops

2.2 The process of workshop teaching

2.3 Application of workshop teaching

2.4 Research on improving employment skills through workshop

teaching

2.5 Effectiveness of the workshop teaching

2.6 Conclusion

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- 3.1 The meaning of role-play learning
- 3.2 The process of role-play learning
- 3.3 Elements of role-play learning
- 3.4 Research on improving employment skills on role-play learning
- 3.5 Conclusion

4.Employability skills in the post epidemic era

- 4.1 Definition of the post pandemic era
- 4.2 The impact of the post pandemic era on the employability skills of college students
- 4.3 Factors affecting the employability skills of college students in the post pandemic era
- 4.4 Characteristics of the employment Situation of college students in the post epidemic era
- 4.5 Strategies for college students' employability skills in the post epidemic era
- 4.6 Research on college students and employability skills in the post epidemic era
- 4.7 Conclusion

5.Employability skills

- 5.1 Definition of employability skills
- 5.2 Composition of employability skills
- 5.3 Previous research about the methods to enhance employability skills
- 5.4 Trends in research on employability skills
- 5.5 Conclusion

1. Employability Diagnosis System

1.1 Definition of employability diagnosis

Employability diagnosis is the analysis of factors that affect employment success, and then combined with job search behavior for inventory. Based on previous literature analysis and combined with the process of employment guidance and consultation, the eight major factors that affect college students' employment are summarized as follows: employment intention, goal identification, job analysis, human capital confidence, opportunity exploration, job performance, monitoring and regulation, and job search efficacy. 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, etc., to inventory students' job search behavior (including the frequency and intensity of behavior) (Zheng et al., 2023).

1.2 The Meaning of Employability Diagnosis

The employability diagnosis aims to answer the following questions:

- 1) Is the student's current problem the real sticking point?
- 2) Are the various resources invested by the school targeted towards students' problems? Have you reached the optimal ratio?

For students:

- 1) Stimulate personal reflection awareness and understand one's strengths and weaknesses in the job search process;
- 2) Assist individuals in making more targeted use of the employment guidance resources provided by the school

Ultimately, it has the effect of improving the success rate and quality of personal employment.

For schools:

- 1) Provide targeted resources for students who are currently and want to seek employment;
- 2) Inventory the effectiveness of the employment counseling resources provided by the school;

3) Ultimately, making employment guidance work more efficient and effective.

1.3 The elements of Employability Diagnosis

Research has founded that the employability diagnostic includes eight variables: Employment intention, goal identification, job analysis, human capital confidence, job opportunity exploration, job performance, monitoring and regulation, job search efficacy. The previous research showed that all eight variables had a good predictive effect on students' employability. This result is consistent with (Chen, 2018); The research results of (Huang, 2018) are consistent. Through the use of the employment ability diagnostic model based on the "diagnosis diversion intervention" mindset, it has been proven that after using the employment ability diagnostic model, students have a clearer understanding of their own employment ability 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 development needs.

1.4 The process of Employability Diagnosis

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 & 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.

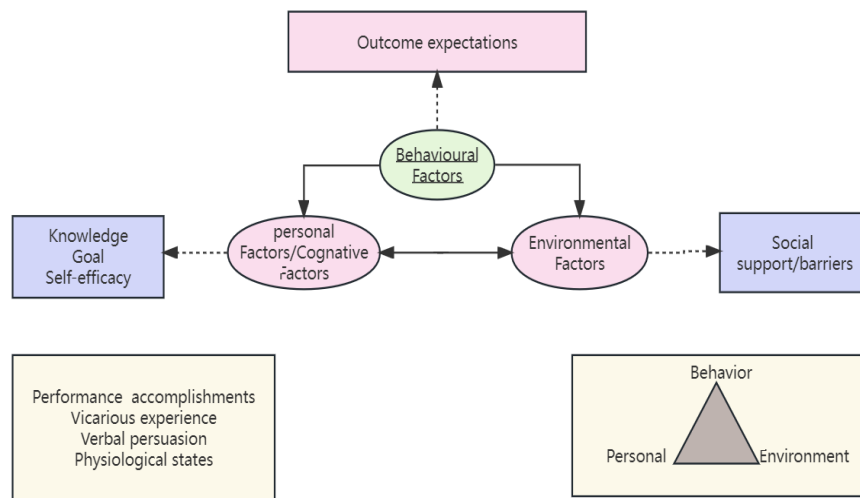
1.5 Theoretical basis of Employability Diagnosis——Social cognitive theory

Social cognitive theory began with Albert Bandura's Social cognitive theory (SLT) in the 1960s. It developed into SCT in 1986 and assumed continuous interaction between individual cognition, environment, and behavior, forming a "ternary reciprocity" (Chen, 2018).

1.5.1 The definition of Social cognitive

The core view of SCT is ternary interactive Determinism, that is, personal cognition, environment and behavior are mutually determined and interacted (Huang, 2018). 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, etc. If a person believes that they can achieve similar success 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, SCT also considers the motivation and expectations that an individual's past experience may affect their behavior.

SCT is one of the classics in the field of Social psychology. It is widely used to understand the changes in human behavior, such as education, business, Health psychology, public health, Mass communication and other fields.



Figures 4 Social Cognitive Theory Model, sourced from Social Marketing and Public Health: A Literature Review

Lent et al. proposed the Social Cognitive Career Theory in 1994. This theory elaborates on the core driving mechanism and process of career choice. This theory is highly enlightening for visitors who lack interest, low self-efficacy, and insufficient mobility. Traditional career theories emphasize that a good career choice should be based on a basic understanding of oneself and career. However, consultants often encounter such difficulties:

- 1) Lack of interest and goals, and the visitor's life experience and verbal information show little intention;
- 2) Low self-efficacy, always having many negative evaluations of oneself, or showing inferiority and not willing to take action;
- 3) Insufficient motivation, feeling that career research and career actions are not helpful or valuable in solving problems. Many theories point to restrictive beliefs (such as the CIP theory) in analyzing these obstacles.

The focus of SCCT theory is on the learning process and experience that lead to these beliefs, as well as how learning experience affects the career choice process and behavior.

Basic assumptions

The SCCT theory attempts to reveal the dynamic mechanism of career choice, in order to predict individual interests, career goals, career choices, and other processes. Theoretical proponents Lent, Hackett, Betz, and others proposed the following key assumptions about career choices and behavior:

1) Individual career goals are influenced by professional interests; It will also affect career choices and actions, further determining subsequent achievement performance.

2) Enhanced self-efficacy and expectation of results can effectively gather professional interests, thereby helping individuals form career goals.

3) Learning experience is the key to influencing individual self-efficacy and outcome expectations; Limited by individual factors and environmental variables. Individual factors: genetic traits, gender, ethnicity/race, health, etc. Environmental variables: market, policy, society, and culture.

1.5.2 The elements of Social cognitive

In summary, The social cognitive mainly include five variables: 1) Personal variables, 2) environmental variables, 3) learning experience, 4) human capital, and 5) 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, 2018; Huang, 2018) that "individuals' cognition, environment, and behavior are interdependent.

1.6 The overall design of Employability diagnostic system

Entering the 21st century, social competition intensifies, and the number of graduates is increasing year by year. Students are facing enormous employment pressure. Faced with increasingly severe employment pressure, students need to continuously enhance their employability in order to adapt to changes in various

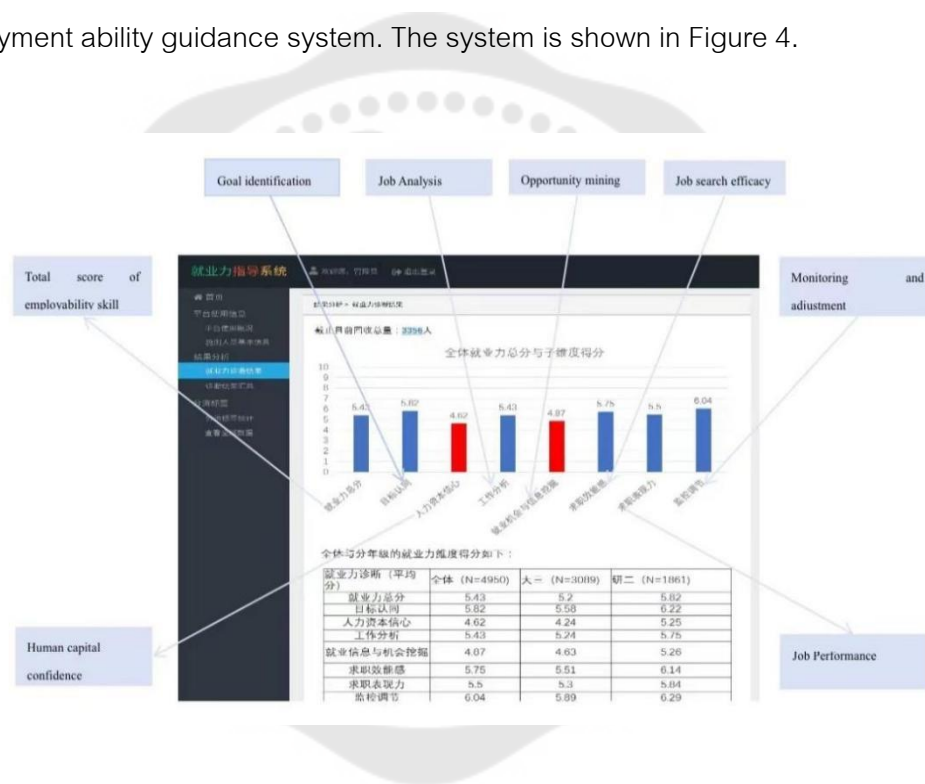
recruitment forms, find employment as soon as possible, and achieve higher quality employment.(Cao & Yi,2020)The study further expands the connotation of precision employment by elaborating on the concept, significance, and implementation path of precision employment,focusing on precise information and ability, and providing effective guidance for the employment of college students in the post pandemic era. Accurate and effective employment guidance is crucial for students,as it relates to personal development,every family, and the development of universities.Therefore,it is necessary for universities to develop a student employment ability guidance system to provide students with accurate employment advice and guidance(Long & Yu, 2022).At present,Chinese universities have specialized employment information registration platforms or employment information upload systems.Although a large amount of employment data has been accumulated,these data are only surface level and fixed models,without further proposing more useful information and models,which hinders the full utilization of student employment ability archives.Therefore,this article uses smart cloud data to analyze employment data and elaborates on the design of an employment guidance system.

1.6.1 Overall system design

In the Internet information age,the Internet is the basic data platform for integrating various information resources.In order to enable college students to make better use of Internet resources for employment guidance education and management, and to meet the needs of college students in the use of mobile phones and the Internet, it is necessary to build an employment guidance system based on smart cloud data (Lv & Chen,2022).Based on the correlation between the five factors that affect students' employability in social cognitive career development theory and the eight factors that affect students' employability in employability diagnosis,a employability diagnosis system was designed.

The system needs to establish employment records for students and track their employment status in real-time and dynamically.It also needs to improve intervention mechanisms,provide timely and effective intervention, and take effective

measures for students with employment difficulties (Zheng et al.,2023).On this basis,targeted employment guidance is provided to students based on their actual situation, and their employability is evaluated and analyzed.Promote the improvement of students' employability.By adopting various methods such as online learning, assessment, and employment consultation, students can comprehensively understand and master their employment status.Especially for students with employment barriers,they can achieve self-assessment and self-monitoring abilities through the employment ability guidance system. The system is shown in Figure 4.



Figures 5 Employment Ability Diagnostic System - Employment Ability Diagnostic Result Interface; Source: Created by the Author

As shown in Figure 4,the employability guidance system currently includes three major modules and six sub modules, including: employability testing (platform usage, basic information of testing personnel);Result analysis (diagnosis of employability, summary of diagnosis results);Shunt tags (Shunt tag statistics,viewing all data).User information can manage the personal information of consultants,including

registration and login,password modification, personal information modification, evaluation result statistics and queries, etc.The diagnostic result summary module can provide students with non face-to-face employment consultation and guidance through the internet, and save the user's employment consultation records.It can also provide users with an instant messaging platform.

Through this system,students can conduct tests,learn online,consult online or leave messages,and see employment ability diagnostic reports.After logging into the system,employment guidance teachers can reply to students' employment consultation requests, query or modify their employment records,and carry out employment testing management. After logging in, the administrator can manage the data.

1.6.1.1 Design of Employment Ability Diagnosis Management Module

Diagnosis is equivalent to collecting data from various aspects to form a virtual "data center" that truly reflects "we understand students";

Firstly,the employment consultant prepares a set of employability testing questionnaires and adds them to the system for testing.On this basis,students log in and answer questions.The database automatically selects the questions for students to test,and students submit the test questions.Systematically analyze and process the collected data to obtain employment ability diagnostic test results.Finally,the employment guidance counselor sends the results of the employment ability diagnostic test to students who have employment counseling needs based on the test results.The functionality of this module helps students to understand their actual employment situation in real time and identify potential problems in a timely manner. Employment counselors can also better grasp the improvement of students' employability and solve problems in a timely manner.

1.6.1.2 Design of Employment Ability Diversion Management Module

Diversion is equivalent to triage, guiding students with different needs to targeted resources.Because students - (1) are largely unaware of their potential problems; (2) Students do not know how to better utilize school resources.

Mainly record the diagnostic results of students' employability and classify them based on corresponding big data algorithms. Students choose corresponding employment guidance based on the corresponding labels, and counselors provide targeted employment guidance to students according to the classification of labels, improving the accuracy of employment guidance work.

1.6.1.3 Design of Employment Ability Intervention Management Module

Intervention is equivalent to seeking medical treatment, providing targeted employment guidance for students based on their employment ability issues.

The employment consultation module mainly includes online consultation, online appointment, and message consultation. Students can directly provide online consultation or seek help from employment guidance counselors through online appointments, SMS consultations, and other means. Online consultation is the main module of the employment consultation module, and students voluntarily choose online counselors to communicate and consult with them. This system fully utilizes the advantages of virtual and shared networks, making communication between students and employment counselors more convenient. When the student's preferred counselor is not online, students can communicate with the counselor in a timely manner at the agreed time, thereby improving the quality of user service and enhancing the overall efficiency of the system.

1.6.2 Functions of employability diagnostic system

Employability diagnostic system. Employability diagnosis is the analysis of factors that affect employment success, combined with an inventory of job seeking behavior. Based on the previous literature analysis and combined with the process of employment guidance and consultation, the eight factors that affect the employment of college students are summarized as follows: employment intention, goal identification, job analysis, human capital confidence, opportunity exploration, job performance, monitoring and regulation, and job search efficacy. The employability diagnostic system has two main characteristics: 1) The employability diagnostic system mainly evaluates based on eight factors that affect employment success, and conducts employability

evaluation tests based on the employability diagnostic model theory;2) Employability diagnosis takes the job search process as a clue, starting from a series of processes such as clarifying job intentions,job analysis,resumes, interviews,etc.,to inventory students' job search behavior. The employability diagnostic system mainly has ten functions: 1) testing 2) report downloading 3) online learning4) assessment monitoring5) assessment personnel information6) overall employability viewing 7) summary of diagnostic results 8) export by class (download report) 9) diversion label statistics 10) view diversion labels.

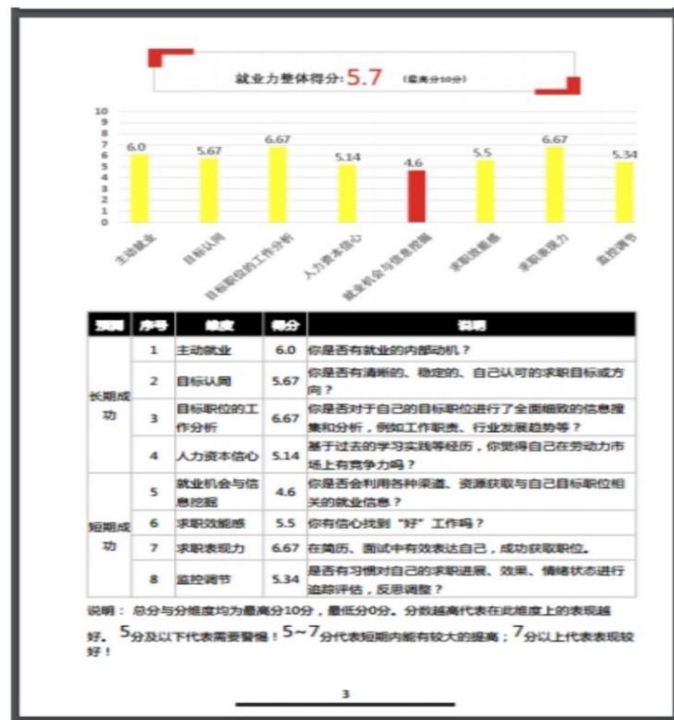
The employability diagnostic system used by researchers mainly has the following functions:

Function 1: Testing



Figures 6 Employment Ability Diagnosis System Test Interface

Function 2: Report Download



Figures 7 Personal employability diagnostic report

Function 3: Online learning



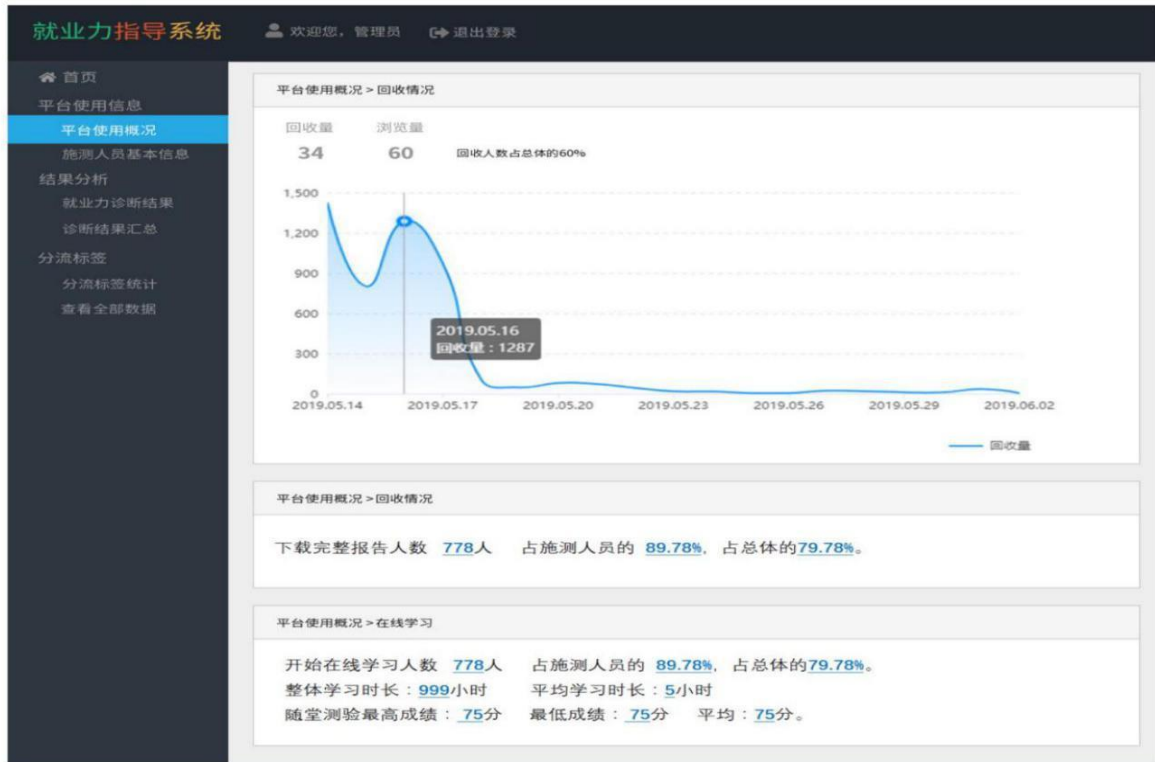
Figures 8 Online learning interface for employability diagnosis system

Function 4: Background monitoring - Evaluation status monitoring



Figures 9 Employment Ability Diagnosis System Platform Usage Interface

Function 5: Background monitoring - Evaluation personnel information



Figures 10 Basic information interface for personnel tested in the employability diagnosis system

Function 6: Background Monitoring - Overall Employment Ability View



Figures 11 Employment ability diagnosis system diagnostic result interface

Function 7: Background monitoring - Summary of diagnostic results

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截止目前回收总量: 3356人

导出已完成人员名单 导出未完成人员名单

未完成测评的人员导出

一级组织/年级/批次	二级组织/班级数量	人数	分学院导出 操作
国际交流学院	14	610	查看 导出
建筑与艺术学院	17	655	查看 导出
机电工程学院	15	588	查看 导出
电子信息学院	20	921	查看 导出
电子商务学院	14	682	查看 导出
经济管理学院	18	862	查看 导出

已完成测评的人员导出

Figures 12 Summary interface for diagnostic results of employability diagnosis system

Function 8: Background Monitoring - Export by Class, Download Reports

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分班级导出

管理员	一级组织/年级/批次	二级组织/班级	总人数	已测完人数	查看学生信息
zgsadmin	国际交流学院	休闲1911	48	40	打包下载报告
zgsadmin	国际交流学院	休闲1922	48	43	打包下载报告
zgsadmin	国际交流学院	会计1961	42	40	打包下载报告
zgsadmin	国际交流学院	会计1962	44	44	打包下载报告
zgsadmin	国际交流学院	国贸1961	40	38	打包下载报告
zgsadmin	国际交流学院	国贸1962	40	34	打包下载报告
zgsadmin	国际交流学院	旅游1971	44	44	打包下载报告
zgsadmin	国际交流学院	旅游1972	41	41	打包下载报告
zgsadmin	国际交流学院	旅游1973	44	43	打包下载报告
zgsadmin	国际交流学院	英语1941	34	34	打包下载报告
zgsadmin	国际交流学院	英语1971	46	46	打包下载报告
zgsadmin	国际交流学院	英语1972	48	48	打包下载报告
zgsadmin	国际交流学院	英语1973	46	43	打包下载报告
zgsadmin	国际交流学院	英语1974	45	44	打包下载报告

Figures 13 :Employment Ability Diagnosis System Export Interface by Class

Function 9: Background monitoring - Split label statistics



Figures 14 Employment ability diagnosis system diversion label statistics interface

Function 10: Background monitoring - View diversion labels

The screenshot displays the 'View All Data' interface of the Employment Ability Diagnosis System. The system title is '就业力指导系统' (Employment Ability Guidance System). The user is logged in as '管理员' (Administrator). The interface includes a sidebar with navigation options: 首页 (Home), 平台使用信息 (Platform Usage Information), 施测人员基本信息 (Basic Information of Test Personnel), 结果分析 (Result Analysis), 分流标签 (Diversion Labels), and 查看全部数据 (View All Data). The main content area shows '分流标签 > 查看全部数据' (Diversion Labels > View All Data). It reports a total of 3356 people recycled so far. There are two buttons: '导出全部数据' (Export All Data) and '导出所选标签数据' (Export Selected Label Data). Below this, there are filters for '学院' (College) and '年级' (Grade), and a search box. The '分流标签' (Diversion Labels) section shows a list of categories with counts: 生涯咨询 (78), 目标认同 (89), 工作分析 (34), 人力资本信心 (34), 就业机会挖掘 (34), 求职表现力-简历 (34), and 求职表现力-面试 (34). At the bottom, there is a table with the following columns: 姓名 (Name), 性别 (Gender), 年级 (Grade), 学院 (College), 专业 (Major), 学号 (Student ID), 手机号 (Mobile Number), 就业力总分 (Total Employment Ability Score), 目标认同 (Target Recognition), 人力资本信心 (Human Capital Confidence), 工作分析 (Job Analysis), 就业信息与机会挖掘 (Employment Information and Opportunity Mining), 求职表现力 (Job Application Ability), and 监控调节 (Monitoring and Adjustment). The table is currently empty.

Figures 15 Employment Ability Diagnosis System View All Data Interface

1.7 Conclusion

The Employability Diagnosis System based on e-learning can provide each student with a test and a personal diagnostic report. Teachers can view the student's evaluation status in the background, view the student's employability status, employability diagnosis diversion labels, and download student reports. Students can use the employability diagnosis system to understand their own 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. Therefore, this research constructs the teaching mode of Employability Diagnosis System processing workshop, which can not only make full use of Employability Diagnosis System application as a way of learning management system, pay attention to the

improvement of electronic service quality,enhance students' sense of participation in e-learning,conduct a series of teaching design through online interaction, but also combine the offline workshop teaching mode to conduct face-to-face communication, one-to-one guidance and consultation, and make up for the shortcomings of online e-learning, Realize two-way, multi-dimensional and interactive teaching to enhance the learning effect.

2.Workshop teaching

2.1 The meaning of workshop teaching

As for the workshop, the earliest introduction of the concept of the workshop can be traced back to foreign scholars (John Matthews,2012),the study from the workshop experience and contact with dancer Kirstie Simsen and choreographer Adam Benjamin.Drawing on Hannah Arendt's concept of "action,"it proposes an understanding of a "workshop" as a time and space to work together on a particular task.(Li et al.,2017)pointed out that the workshop first appeared in the field of education and psychology, and later, the famous architect Lawrence Harpring used it in urban planning to organize discussion and exchange among people from different positions and perspectives.

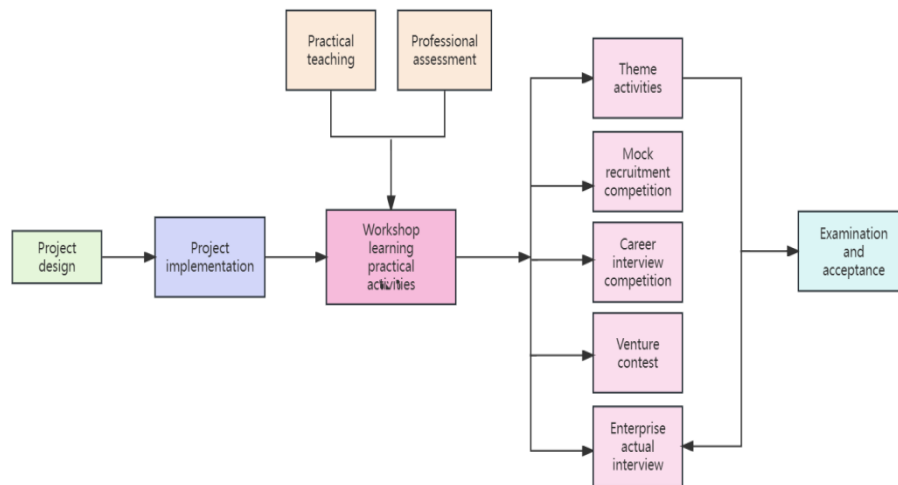
On the origin of workshops, domestic related studies have reached a consensus, such as (Wang & Feng,2019;Guo,2021)agreed that it originated from Bauhaus Institute in Europe in the early 20th century.It was a learning model focusing on interactive experience that was used to train engineers and architectural designers in the early stage, and later it gradually evolved into a practical teaching model.

As for the definition of WORKSHOP, there is no consensus among domestic and foreign researches. After literature retrieval and analysis, we generally agree (Wang & Feng ,2019) that "WORKSHOP" is a self-study method that mainly takes the form of public participation and is used to improve ability.The workshop focuses on a specific topic, which has been widely accepted internationally as an important way of learning. As a practical teaching mode,"workshop" originated from the Staatliche Bauhaus (1919-

1937), which aimed to cultivate engineering design and architectural design. The school's founder, Walter Gropius, advocated an education that was "both technical and artistic." In the course of teaching, the teacher who serves as the art form course is called the "form tutor" and teaches the theory course; The teachers who take the technical and handicraft courses are called "studio masters" and are responsible for assisting and guiding their practical teaching. The practice model formed in this way is also called "workshop teaching", which is increasingly applied in the field of modern education and training. Subsequent studies will also apply the concept to related topics.

2.2 The process of workshop teaching

In recent years, more and more studies tend to study the workshop from the perspective of group counseling, consultation and teaching. For example, (Wang, 2018) Career workshop consists of a group, and teachers guide students to carry out team interaction, case analysis, career planning and other means to promote students' ability to improve. (Fu, 2018) Career Workshop consists of a group, with teachers guiding students to carry out team interaction, case analysis, career planning and other means to promote students' ability to improve. (Deng & Liu, 2020) The counselor workshop includes three roles: workshop owner, tutor and participant. The workshop owner is an expert in a certain field, designing and guiding the development of a certain theme activity; The tutor selects the participants as the head teacher, guides and urges them to participate in the activities as required and summarizes the results of the activities; The participants are the counselors who are interested in the subject and want to improve their professional level. These counselors participate in the workshop activities as learners and complete various tasks such as learning and practice under the guidance and help of the workshop owner and tutor, so as to improve their professional level.



Figures 16 The picture is from the Journal of Chifeng University (Wang Chunsheng,2018) "Research on Improving College Students' Employability through Career Workshop".

Such as virtual reality,electronic mobile learning constantly change, with the help of team learning, cooperative learning to improve students' practical ability is still our key research direction, therefore, the workshop practice teaching conforms to the national talent cultivation according to the requirements, the teaching pattern of great study space, and can be widely used in various types of teaching.

2.3 Application of workshop teaching

In terms of the domestic research status, by reading about workshop research subject in recent years found that workshops applied to college students' employment guidance to promote the university students' employment ability ascension has become a hot research topic, such as (Li Xinyi et.al,2017) to the workshop as a carrier to exercise students professional ability;(Wang,2018)Improving Students' Employability through Career Workshops;(Fu,2018)Improving Students' Employability through Career Workshops;(Lin,2019)The employment workshop mode is adopted to promote students to change their employment concept, guide students to take the initiative in employment and improve the employment rate. (Wang & Feng,2019)

introduced the application of workshop teaching model in career guidance course, and compared it with the traditional teaching model.(Deng & Liu ,2020)To improve the employment competitiveness of students by relying on the counsellor employment consultation workshop based on coaching technology;(Lin,2021)Strengthening students' employment skills by making recommendations on the construction of counselor studios;(Guo,2021)provides effective career guidance to students through "workshop" education.

Research status of workshops abroad.Through literature review,it is found that the research on the theme of workshops in recent years mainly focuses on three aspects:teacher teaching, medical education and art therapy consultation.Among them, the research on the application of workshops in medical education is the most, followed by teacher teaching.

Angle One:Teacher teaching.For example, (DanaM.Barrya et.al,2018) improves teachers' creative teaching ability through virtual seminars.Creative teaching is important to engage and motivate students (of all ages) to pursue academic research, especially in STEM (science, technology, engineering, mathematics) fields. Countries need qualified STEM graduates to compete on a global scale, creatively solve challenging problems, and serve the scientists, engineers, and more of tomorrow. (Jin et.al.,2019) Question-based seminar promotes teachers' questioning ability. This study investigated the impact of problem presenting workshops on teachers' concepts and skills in question presenting, and their impact on the concept and design of mathematics courses using problem presenting methods. The results showed that although the vast majority of teachers had little or no experience of asking questions prior to the workshop, teachers were able to ask math questions in a variety of situations. After the workshop, teachers were more familiar with posing questions and using them to teach math.(Astrid M et al.,2019)designed a reading workshop to engage students in active learning, described how student teachers can use digital technology to redesign reading workshops to promote active learning, the study showed the steps of designing a digital reading workshop, It also discusses the implications of teacher

education for future teachers to redesign their work methods based on new technologies.(Harth & Panke,2019)described the concept of the workshop and the final insights gained from interviews,customer journeys and prototyping.It provides ideas and examples for creating inviting learning Spaces and cultures,with a focus on coexistence with and without digital tools.This article argues that the digital shift makes it more important than ever to focus on spatial learning environments and the physical learning Spaces we create on campus.As online learning offers viable alternatives to classroom-based teaching and learning practices, careful design of space and time is particularly important for the space and time we provide.(Liu,2022)explored the role of understanding expert teacher workshops as professional learning communities (PLCS) in building teacher capacity in Chinese language turnaround schools.

Angle two: Medical education.(Christodoulou et al.,2014)To determine the success of the medical workshop from the perspective of the trainees,where the medical workshop is a scientific activity aimed at introducing the latest knowledge to the participants and teaching medical skills. In the surgical profession,it contributes to the development and maintenance of surgical skills;(Baral et al, 2019) evaluated the effectiveness of a national interactive workshop aimed at improving ECG interpretation among medical students in the UK through an educational workshop. A national ECG workshop that emphasizes activity-based learning may be effective in improving the ability of medical students to interpret ECG.Seminar (Reeves,2019) used to bring medical care and communication skills.The aim of the study was to explore the effectiveness of a novel workshop in teaching transferable knowledge and skills in palliative, end-of-life and bereavement care communication to facilitate a sample of first-year pre-registered nursing students undergoing clinical skills training at a UK university.This study explored the effectiveness of a novel workshop in teaching transferable knowledge and skills in palliative, end-of-life and bereavement care communication to first-year pre-enrolled nursing students.The study used innovative methods to teach communication skills such as role play, simulation and drama;However, there is a lack of literature examining the use of theatre in this

professional context.(Cooper et al.,2020)Using seminars to support clinical communication.The aim of this study was to enable first year midwife students to reflect on their communication experiences, inform and expand their clinical communication by drawing on two different disciplines - midwifery and linguistics.The results of a study examining innovative preparatory workshops for first-year midwifery students are reported.Quantitative and qualitative survey data on pre-and post-workshop and post-clinical placement were collected and analyzed using language mapping and thematic analysis.After the workshop and clinical placement,a marked change in self-assessment of competence was noted.Students appropriately develop and use a meta-language to describe and evaluate communication while demonstrating an awareness of the complexities of professional communication.They are able to find a balance between important technical information and the human side of communication.This had a positive impact on their perception of themselves as partners.(Kachare et.al,2020)By organizing surgical skills seminars, it was found that basic skills seminars could improve students' comfort and promote interest in surgery.(Tipton et.al,2022)found that medical students' teaching skills improved after educational seminars;(Tipton et.al,2022)through the "residents teacher"(RaT) workshop,in order to improve the residents' teaching ability.(Huang et.al,2022) proposed a novel flipped classroom clinical skills training model that utilizes a combination of pre-workshop,web-based learning, and hands-on workshops to shorten face-to-face contact time and maintain residency training during the pandemic.The effectiveness of the training model was evaluated by pre-test and post-test skills assessment,two-way feedback and five-point Likert scale structured questionnaire. (Kobritz et.al,2022)assessed the impact of resident-led resident teacher workshops (RATW) and assessed the adaptation from face-to-face to virtual delivery.

Angle three: Art therapy consulting (Drapeau et.al,2022)seminar for art, will be aimed at improving the understanding of the vicarious trauma (VT),and self care response (RA) of art practice,the seminar to promote the normalization of the vicarious trauma.

Therefore we found that the research related to the workshop theme is mainly used in the fields of college students' employability improvement, student management work group counseling, individual psychological counseling and so on. In recent years, foreign research mainly focuses on medical education and training. Comparatively speaking, the domestic research on workshop is more widely used, while the foreign research on workshop is relatively simple. Therefore, we can know that there are a lot of potential worth exploring in the future workshop research, especially the follow-up research based on rain classroom combine workshop teaching practice will inject new vitality into this topic research.

2.4 Research on improving employability skills through workshop teaching

(Christodoulou et al.,2014) Introduced the key role of seminars, which provided useful guidance for our understanding of organizing workshop form teaching; (Li et al.,2017; Wang,2018) analyzed the experimental process and results of the study twice, and the data analysis was valid, and proposed that career workshops could help improve students' employment outlook. (Fu,2018) proposed that the workshop construction should strengthen teachers' refresher training, and the activity design should be targeted, and the research should be supported by relevant experimental data. (Lin,2019) The process construction ideas of Internet & employment precision service model are relatively clear, novel and comprehensive, and the development suggestions put forward are scientific and operable. (Wang & Feng,2019) innovatively put forward the combination of work effect, which made a new breakthrough compared with the previous research. The teaching model of workshop focuses on experience and interaction, which is better than the traditional teaching model, and the setting of workshop theme pays more attention to the training of students' professional experience. (Deng & Liu,2020) Combining employment counseling with coaching techniques can better stimulate students' enthusiasm and guide students to change their employment concepts more accurately. The research proposed to improve the career guidance ability of instructors and teachers based on coaching technology, which coincides with the previous proposal (Fu,2018) that teacher training should be

strengthened in workshop construction.(Lin,2021)proposed to strengthen the construction of the counselor team through the construction of the studio, so as to improve the employment skills of students,with a novel perspective;(Guo,2021) proposed that the theme of the workshop should be combined with the demand of the job market,and the teaching process of the workshop should be combined with the recommendation of students' employment practice,which is innovative and referential.

2.5 Effectiveness of the workshop teaching

(Christodoulou et al.,2014)Based on 30 articles of medical search,the basic characteristics of a successful seminar are proposed mainly from the perspective of trainees.Including the objectives of the workshop, appropriate faculty and speakers, highly motivated participants,use of simulators and evaluation sheets,venue and registration fees all play an important role in the success of the workshop.(Li et al.,2017)believe that the workshop can provide reference for career guidance;(Wang,2018)pointed out that career workshops can improve the employability of college students and are better than traditional teaching models.(Fu,2018)Career workshops can improve the employability of college students and are better than traditional teaching models. (Lin,2019)The practice of "Internet and employment" precise service mode based on employment workshops can better guide college students' employment and improve the success rate of employment.(Wang & Feng,2019)The combination of "workshop" mode and career guidance courses can help improve students' employability skills.(Deng & Liu,2020) The design of instructor workshop based on coaching technology can improve the employment guidance ability of counselors and thus the employment skills of students. (Lin,2021)Improving students' employability by strengthening the construction of counselors' studios;(Guo,2021)made it clear that the employability of students can be improved through "workshop" education;(MRes et al.,2019)To improve teachers' creative teaching ability through virtual seminars.(Cai et al.,2019)Question-based seminar promotes teachers' questioning ability.(Sølvberg & Rismark,2019)designed a reading workshop to motivate students to learn actively; (MRes et al, 2019) evaluated the effectiveness of a national

interactive workshop aimed at improving ECG interpretation among medical students in the UK through an educational workshop. A national ECG workshop that emphasizes activity-based learning may be effective in improving the ability of medical students to interpret ECG. Seminar (Reeves, 2019) used to bring medical care and communication skills. (Cooper, 2020) Using seminars to support clinical communication. (Tipton et al, 2022) found that medical students' teaching skills improved after educational seminars; (Tipton et al, 2022) To improve the teaching ability of residents through "resident teacher" (RaT) seminars.

The above research shows that education and teaching training, discussion and other activities based on workshops can promote the improvement of students' ability, enhance the effect of education and teaching, and improve teachers' teaching ability, which has high research value. (Sølvberg & Rismark, 2019) studies point out that digital technologies are playing an increasingly important role in our knowledge society and may influence the development of educational practices. Student engagement is at the heart of student activity, and student discussion, reflection, and knowledge sharing are designed to facilitate this engagement. In this way, it can be seen that a core element of active learning is to introduce student activities into the curriculum and promote student participation accordingly. Thus, this way of structuring the workshop approach differs from traditional content-focused education, where teachers are encouraged to push as much material as possible in a given course. (Harth & Panke, 2019) The role that students find particularly interesting in workshops is that of aspiring teachers: By carefully exploring their own learning environment and identifying learning enablers and barriers, they feel empowered to consciously perceive their future learning spaces and roles in vocational schools, and to optimize their teaching under the mandate of existence. Two questions are raised based on existing research: How can campus learning be as lively, collaborative, and focused as possible? How can online learning be as personal, flexible, and efficient as possible? It is worthy of further study.

2.6 Conclusion

In summary, the workshop teaching model has advantages such as teamwork, situational, experiential, and interactive, and its teaching characteristics are in line with the current development needs of higher education in the post pandemic era. By applying coaching skills to student employment counseling through the 'Employment Workshop', teachers can transform from a 'suggestion giver' to a 'helper'. Through communication with students, they can understand their true confusion and needs, help them find their own life vision and career values, enable students to have a more comprehensive understanding of themselves, and encourage them to constantly think about how to use their own resources, What effective actions can you take to find a job that you are satisfied with. Teachers should give students absolute trust and guide them to explore their own role cognition, beliefs, abilities, etc. Through effective questioning, teachers can guide students to pay attention to potential changes in the future, and ultimately, students can design their own action plans. The process of using coaching techniques to clarify goals, tap resources, and determine actions can help teachers improve the effectiveness of student employment counseling work. Based on the above application advantages, we can further research and explore: How to set up the roles of teachers and students in the workshop teaching model? How to improve students' employment outlook through workshop teaching? How to strengthen teacher refresher training to promote workshop construction? How to design targeted and market-oriented themed activities to enhance students' professional experience and exercise? How to utilize intelligent network resources to explore and construct role-playbased learning and workshop teaching model?

Table 1 Conclusion the functions of workshop pick for using this research

Feature of workshop	Tools for support Employability skills
<u>Coaching technology</u>	The application of coaching technology in student employment consultation can transform counselors from "advice" to "help", understand students' real perplexities and needs in the process of communication with students, help students find their own vision of life and professional values, make students have a fuller understanding of themselves, and encourage students to constantly think about how to use their own resources. Through what effective actions can find their own satisfaction in the job.
Group guidance	The career workshop consists of a group, with teachers guiding students to carry out team interaction, case analysis, career planning and other means to promote students' ability to improve. The group of students in the workshop can be composed of students from different majors and grades. Based on the theme design of the workshop, they have the same cooperation goal during the implementation of the activity. For the specific problems in the process of job hunting and employment, brainstorm, role play, project research and other forms are adopted to jointly seek solutions to help students improve their adaptability and communication ability, and cultivate the spirit of cooperation.
Individual counseling	By asking questions effectively, counselors can direct students' attention to possible changes in the future, and ultimately, students can devise their own action plan. Counselors should give students absolute trust and guide students to explore their own self-role cognition, belief, ability and so on. Helping students clarify their goals, explore resources and determine the process of action can help counselors improve the effectiveness of student employment counseling.
<u>Situational teaching</u>	The workshop is highly professional, and the "professionals" and "facilitators" are all people with practiced professional skills. By creating scenarios, students can participate in a wide range of simulated job hunting scenarios. The organization model of "workshop" is introduced in part of the career guidance course. The teaching class is divided into several groups, and each group is composed of several members. By creating situations, various methods such as discussion, games, peer inspiration and expert analysis are used to discuss and solve problems to complete the teaching
Interactive/experiential	The teaching mode of the workshop focuses on experience and interaction, which is superior to the traditional teaching mode. The theme setting of the workshop pays more attention to the training of students' professional experience. The workshop usually consists of three roles, namely "participant", "professional" and "facilitator". Generally, the workshop consists of 10-20 people and conducts a thematic research around a certain theme. The workshop broke the traditional boring theoretical teaching mode and focused on interactive experience. This form is more interesting, can arouse students' active participation, enhance students' experience and practice.

3.Role-play learning

3.1 The meaning of role-play learning

The Origin of social role theory: About the origin of social role theory, domestic and foreign scholars have reached a consensus.(Shen,2019);(Shi,2020);The word "role" in social role theory comes from drama, which means the dramatic characters played by actors.The concept of role was first introduced into the field of sociology by sociologist and social psychologist Mead from drama.(Zhou & Zhang,2022) Studies have found that role is a proper noun in drama, originally referring to the characters played by actors after dressing up. Later, it was introduced into sociology by scholars in the 1920s and 1930s, mainly to explain that people are the sum of various social roles they play on the big stage of society. Role becomes the core content of symbolic interaction theory.(Wen,2022) pointed out that the connotation of "role theory", also known as "foot color",originated from the stage of drama and was later applied to the big stage of society.

The formation and development of social role theory:(Shen,2019) points out that the earliest studies the theory of American sociologist mead G.H.M (ead) believe that "character" is on the basis of the reflection by studying the role of others and developed, and the role of performance was set plays,culture can only be as regulations about the scope of the role performance.American anthropologist R.Linton further enriched and developed the "social role theory", whose core point is that when individuals are in a certain position in society,a natural connection corresponding to this position is established,which makes them possess intangible rights as well as status.(Shi,2020)The concept of role was first introduced into the field of sociology by sociologist and social psychologist Mead from drama, with the purpose of explaining the predictable interactive behavior pattern in people's communication and the relationship between individuals and society. Later, it gradually developed and perfected,forming the social role theory.(Zhou & Zhang, 2022) found that in sociology, "role" is also called "social role".The Chicago School first applied this concept systematically, among which the American social psychologist G.H.Mead's research is the most famous.The study

takes "role" as the basic concept of sociology, explains the predictable interaction mode in people's communication and the relationship between individuals and society, and emphasizes the mechanism and important role of interpersonal communication in the formation of roles. On the basis of Mead, anthropologist Linton (R.) put forward the concept of "social role" in his book *The Study of Man* published in 1936, believing that role is "a set of norms provided to actors as a component of culture in any particular occasion", and individual roles are shaped by social culture. Role-playing should be carried out according to the script of social regulation. After the Second World War, many sociologists, such as R.K. Merton, Ralph Turner (H.), Irving Goffman (G.) and others, have made contributions to the development of role theory. (Wen, 2022) pointed out that George Mead, an American social psychologist, introduced it into sociology in the 1920s. After continuous enrichment and improvement by sociologists, it has now developed into a unique social role theory.

The definition of social role theory: (Wang, 2020) on the introduction to the theory of social role, social role as is consistent with the people of a certain social status, identity, rights and obligations of a set of norms and behavior patterns, is people to people with specific identity (society) behavior expectations, is the foundation of the social group or organization. Social role theory holds that individuals or organizations in society, like actors on the stage, play certain social roles, and society provides a "script" for them to guide the different roles assigned to different members of the society. Only WHEN DIFFERENT ROLES COOPERATE with each other consciously and HIGHLY closely according to the norms and requirements of their roles, can the best expected effect be fully realized. (Shi, 2020) Social role reflects a set of norms and behavior patterns of rights and obligations consistent with people's identity and social status, as well as behavioral expectations for people with specific status. Each person plays a variety of roles in the social network. Different roles enjoy different rights, and they must also assume corresponding responsibilities and obligations. Role theory is a theory that explains human behavior and reveals its rules according to people's status, identity, understanding, expectation and requirement of roles. (Wen, 2022) "role theory"

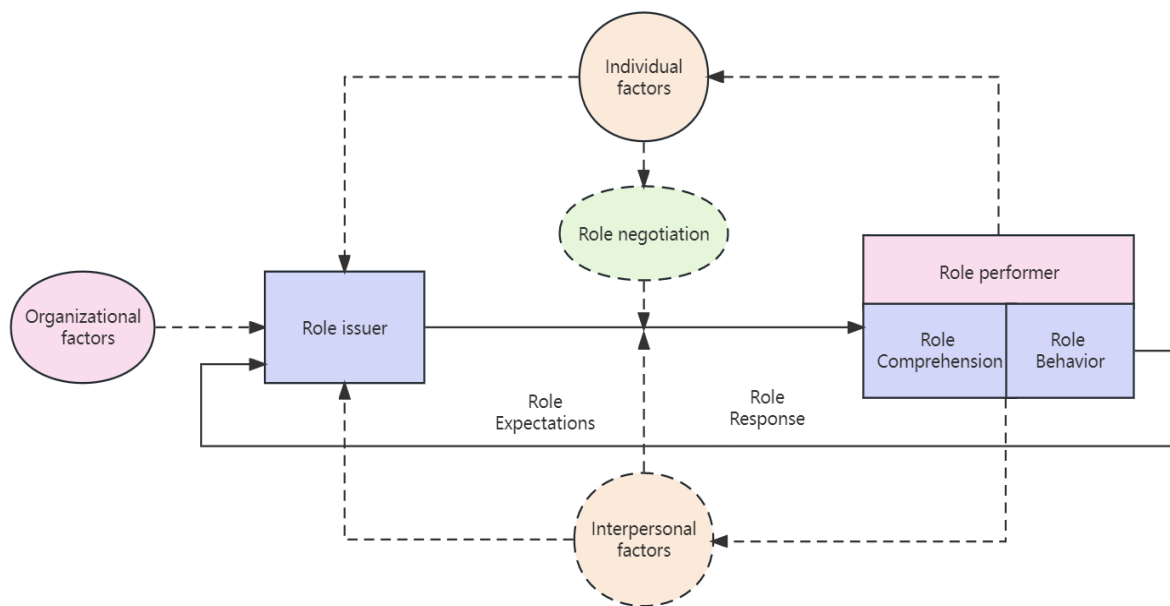
think people occupy a certain position in the social structure, each location is associated with a specific role and social role is associated with a particular position in the social structure set of expectations and behavior, how to see their own role influences how we respond to their changes. Each of us will play a variety of roles in our life. In the process of role playing, individuals carry out various social practices. In this process, a series of related concepts are also involved, such as role expectation and role gap, role complementarity and role conflict, role behavior and role psychology. "Role theory" is of great significance for analyzing and solving some social problems. With its development, more and more people apply role theory to the field of education, hoping to explain some educational phenomena from a new Angle.

Definition of role-play learning: (Li & Yang, 2017) believes that role playing is an important core concept of social role theory, and the level of role playing will directly affect the effect of individual social interaction. The so-called role play refers to a series of role behaviors carried out by individuals according to their specific positions and role expectations and role norms. (Shen, 2019) The playing of "role" is actually the process of exercising power or demonstrating status in practice. (Lowell, 2019) Role-play simulations can provide students with experiential learning opportunities to develop strong interview and diagnostic skills, as well as practice the skills they learn in the classroom.

3.2 The process of role-play learning

Role Formation Theory (Shi, 2020) According to role theory, the formation of a specific role generally goes through a series of processes from the outside to the inside. Through the effective role construction, including role concept, role consciousness, role image, role mechanism, etc. taken by the outside world, it is finally internalized into the role behavior recognized by the members of society, so that the role holder is basically consistent with the role expectation of the society, groups, organizations or others. (Zhou & Zhang, 2022) According to sociological theories, a complete role-playing process usually goes through three steps: role expectation, role perception and role behavior. Among them, role expectation is also called role expectation, which refers to the expectations and requirements of the society for a

certain role behavior, and is the external factor that affects individual role behavior. Only by accepting and correctly understanding social expectations can individuals successfully play their social roles. Role perception, also known as role cognition, refers to the knowledge and understanding of role norms and role requirements by role-players. Compared with the external social norms expected by roles, role cognition emphasizes the subjective interpretation and cognition of role players. Due to the differences in thinking level and values of each individual, the same social role may also have completely different or even completely contradictory understanding and cognition. The last stage is called ROLE PRACTICE or ROLE behavior, which is the actual process or activity of role-play and is the development of role perception. (Zhou & Zhang, 2022) found that when a person occupies a certain social position, has the conditions to play a certain role, and carries out activities in accordance with the behavioral norms required by this role, it is playing a social role. However, the roles played by people in each society are not single, and exist in the state of "role set", and teachers are no exception. For example, due to the change of activity scene and communication group, teachers should play the role of instructor when facing students, and play the role of colleagues when facing other teachers. Back at home, teachers also play the roles of parents, husbands, wives or children. Even in the professional scope of "teacher", due to the particularity of educational activities, with the change of time and space of educational activities, "teachers and students, educational content and various educational environments form different relationships, show different behaviors, and thus play different roles".



Figures 17 Role-play formation flowchart

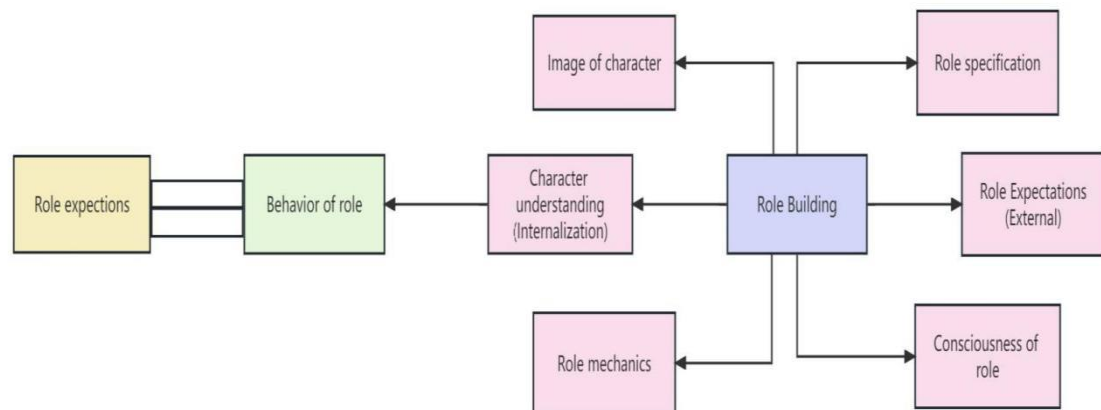
source: Research on audio-visual education (Guo &Wu,2022)Teachers in the Age of Artificial Intelligence from the Perspective of Social Role Theory: Distress, Attribution and Clarification

3.3 Elements of role-play learning

(Shen,2019)points out that constitute the basic elements of social role today,with the deepening of the research, about the role of components has been basically formed consensus,"character" of three basic elements including individuals with social status, social development, the manifestation of the expectations of individual behavior and individual, individual behavior patterns.Social status refers to the position of social members in the social system,which is the basis for individuals to constitute their roles.When an individual is in a certain position in the society and exercises his or her rights,he or she enters a "role".If an individual has no social status, he or she has no "role" at all, and the change of role often depends on the change of the individual's social status.Role not only that,but also embodies the social expectation for the behavior

of individual,even the society in a certain position of the specific requirements of the individual behavior,it is the American sociologist parsons noted: "any society has its own characteristics,a series of 'role expectation',it means that every social member will be looking forward to play or act as a social role,At the same time, society protects these role expectations with reward and distribution systems." In addition, different social roles have their own patterns of behavior, society is also looking forward to the individual in a particular social role to follow certain standards apply, such as doctors should heal the wounded and rescue the dying, the police should be getting rid of, teachers should be teaching and so on, this kind of behavior patterns gradually becomes the social role of identification symbols. According to the theory of social roles, the three basic elements of roles do not exist independently, but are interrelated and promote each other. Whether the role can be fully played depends on the degree of coordination among these elements. (Wang,2020)Social role theory includes role positioning, role expectation, role gap and role adjustment.(Zhou & Zhang,2022)Although sociologists do not fully agree on the specific views of social role theory,their views all involve norms and expectations related to certain social status or identity.It is generally believed that social roles are determined by certain social status and conform to certain social expectations.It is the reflection of people's various social attributes or social relations,and it is the basis of social groups or social organizations.In terms of types,social roles can be divided into pre-created roles and self-created roles according to the different ways people acquire roles.According to the degree of role normalization,social roles can be divided into prescriptive roles and open roles.Social roles can be divided into utilitarian roles and expressive roles according to the goals they pursue.For example, the requirements of the state on the training of students,the role of students to become a qualified student, they must carry out corresponding training and study after enrollment,in order to acquire the basic knowledge and skills reserve. In addition, the Higher Education Law of the People's Republic of China, the Regulations on the Administration of Students in Ordinary Institutions of Higher Learning and other relevant national legal documents have strict and clear provisions on the

rights and obligations of students and the standards for their employment. Students also show social norms of behavior, values and ideological ethics in their study and life.



Figures 18 Role formation process

source: Journal of Changchun University, Volume 30, Issue 12(Shi Huiqiong, 2020), "Exploring the cultivation of medical college students' professional role cognition from the perspective of role theory"

3.4 Research on improving employment skills on role-play learning

By retrieving relevant literature study, research on social role theory very much, from nearly five years of research trends, social theory more keywords, rural development, international political relations with social work, teacher's role, social development, team building, teaching, and other fields, it embodies the social role theory of universality, applicability. Application of role theory: (Zhang & Wu, 2018) the research reexplored the roles of teachers and students in flipped classroom by introducing the "role" theory, and defined "role" as a set of behavior patterns that reflected an individual's identity or status, defined the individual's behavior, and made it conform to social norms or expectations. At the same time, the role set generally contains two situations, the first refers to a group of interdependent role relations. In flipped classroom, teachers, students and colleagues constitute a role set. The second kind

refers to the phenomenon of the integration of multiple roles, which is the collection of multiple roles within an individual. From the second point of view, the research mainly assigns different roles to teachers and students in different stages under the flipped classroom. Teachers and students integrate multiple roles, and expounds the model of teacher-student relationship from the perspective of "role" theory. (Shen, 2019) defined the role of expert counselors with the help of "social role theory", analyzed the expectations of the state, society and students for the role of counselors, and further clarified the role positioning of counselors. (Lowell & Alshammari, 2019) The results determined that students found the use of online 3D virtual environments beneficial. Students reported that they believed they learned more during their activities in the online 3D virtual environment than other learning activities and that role-playing using the online 3D virtual environment was an effective way to develop mental health interview and diagnostic skills. (Wang, 2020) The purpose of the study was to use a developed role-playing game (RPG) to help new students familiarize themselves with the school environment by solving tasks during the game. The research aims to take full advantage of the characteristics of game-based learning and explore whether to integrate. The study concluded that engaging in game activities engaged students' attention to study and helped them learn in a more enjoyable way. In addition, using RPGS in informal learning provides students with exposure to a real campus, making it a good way to trigger effective learning by applying learned knowledge to solve in-game problems. Future research work is also discussed. (Wang, 2020) Based on the role theory, the role positioning and role expectation analysis of the government, schools, enterprises and industries are carried out, and the role adjustment is carried out by analyzing the role gap of each subject, and then the relevant strategies are put forward. (Wang, 2020) believes that role-playing games have been integrated into various educational scenarios and have the potential to provide learners with various experiential learning opportunities by determining the actions of game characters to simulate real scenarios. (Zhou & Zhang, 2022) expounded the beginning teachers and their role playing dilemmas from the perspective of social role theory. When there is

conflict between the different roles a person plays, or when different people place two or more conflicting role-playing requirements on the roleplayer, or when the roleplayer feels that the role he or she is actually playing does not fit with the role he or she perceives internally, there will be role gaps or role playing disorders (including role tension, role conflict, role ambiguity, role interruption, etc.). Dysregulation of role-playing will lead to low work efficiency of students (mainly manifested as difficulties in learning, participating in class management and integrating into the workplace life environment), and even lead to misconduct of students in serious cases, eventually leading to the failure of role-play. For graduate student, graduation is not only faced by the "college students" to "professional" role, and in a short time into the new working team, adapt to the new learning environment, it's role in students' socialization process to realize students cognitive and the practice of the critical period of transformation, is also the student role playing in the process of contradiction and conflict in the most concentrated period. Research shows that seniors are prone to feel too much pressure, loneliness, loss, loss, tension, anxiety, lack of self-confidence and other bad emotions. In the academic year of graduation, if the graduates can receive timely assistance, their socialization development will be smooth; if they are not given adequate guidance, their socialization process will be blocked, and many people are frustrated by their job search.

3.5 Conclusion

To sum up, we can find that social role theory has a wide range of application fields and strong support, which can support subsequent research and development. (Wang, 2020) Role-playing games have been integrated into various educational scenarios and have the potential to provide learners with a variety of experiential learning opportunities to simulate real situations by determining the actions of game characters. In role-playing games, learners have the opportunity to experience learning immersion, unknowingly acquire skills, improve motivation, and achieve good academic performance and learning retention. Therefore, after reviewing relevant game-based learning research, a role-playing game was adopted to simulate real school life,

providing students with the opportunity to explore and familiarize themselves with the campus through gameplay.

Table 2 Conclusion the process of role-play learning

Role-play learning	The supporting of Employability skill
Role Expectations	<p>According to social role theory, role expectation is an important premise and content of role playing. If individuals follow the requirements of role expectation, they can improve the sense of identity of role expectation subjects such as society and enterprises and achieve the expected goals of role playing. As the talent demand side, enterprises will study and formulate the appropriate talent demand standard according to their own development conditions before releasing the recruitment information, so as to recruit talents in a targeted way. Therefore, before applying for a job, college students should have a comprehensive understanding of the role expectations of enterprises for college students through schools, professional consulting agencies and other channels, so as to achieve "know yourself and your enemy, and win a hundred battles".</p>
Role definition	<p>Before entering the employment process, college students should accurately position their roles according to their own conditions and enterprises' expectations. Based on years of experience in career guidance, Parsons put forward the theory of idiosyncrasies in career selection, holding that career selection should follow three steps: first, clearly understand the physical and psychological characteristics of individuals, second, analyze the requirements of occupation for people, and third, match people with occupation.</p>
Role learning	<p>To successfully play a social role, it is necessary to fully understand and grasp the rights, obligations, attitudes, emotions and behaviors of the role. In other words, it is necessary to take the initiative to learn the role, which is an important condition to improve the employability of college students. The content of role learning mainly includes two points: one is to learn the rights, obligations and norms of the role; The second is to learn the perception, emotion and attitude of the character. Taking career development as an example, college students should not only learn the professional knowledge and skills that professionals should have, understand the legitimate rights and obligations that professionals should fulfill, as well as the norms of behavior of professionals, but also improve the career planning ability that professionals should have, enhance the sense of responsibility, consciously strengthen the collective consciousness and concept, and organically combine individual interests with collective interests.</p>

Table 2 (Continue)

Role-play learning	The supporting of Employability skill
Practice of role	Role practice is the actual execution of role tasks by the subject. True knowledge comes from practice. To improve the employability of college students, they need to constantly carry out role practice and increase their ability through practice. Sternberg's interviews with leading business executives and psychologists suggest that an individual's understanding of both internal and external knowledge is the key to career success. However, the learning and mastering of in-line and out-of-line knowledge does not come from professional learning and preparation, but from constant exploration and accumulation in the work. Employability depends on the long-term practice of an individual. Specifically, it is accumulated from personal experience, perception, summary and accumulation in the individual's unique life experience, working environment and interpersonal communication.
Role playing skills	Role-playing skills refer to the skills and abilities required by individuals to successfully complete role-playing tasks in accordance with the expectations and requirements of the selected role. Roleplaying skills determine the effect of roleplaying. College students need to improve their cognitive ability and activity ability of role playing in job hunting, career development, career transformation and other employment processes, so as to better present their "ideal self", cater to the role expectations of enterprises for college students, achieve the "promotion of attention", feed back to enhance the intrinsic driving effect of college students' career development, and finally improve their employability.

4.Higher education in the post-epidemic era

4.1 Definition of the post pandemic era

(Luo,2020)Argues that after SARS era mainly refers to the basically in a controllable state under the national governance, but subject to any foreign migrant to the influence of reflux and seasonal outbreak still has repeatedly or small outbreak risk, and on people's consumption habits, economy, culture, education and so on various aspects have a profound impact.(Zhong &Nan,2021) points out that some scholars "outbreak after age" is defined as: not outbreak disappear completely, everything is back as before, but the outbreak has fluctuated, at any time may be small outbreak, nonlocal return from foreign countries and seasonal attack, and delay a long time,which has a far-reaching influence on various aspects of the era.The post-pandemic era is different from the outbreak period,but the impact of the pandemic will linger.This includes two aspects: first, the epidemic still exists and may even break out again.

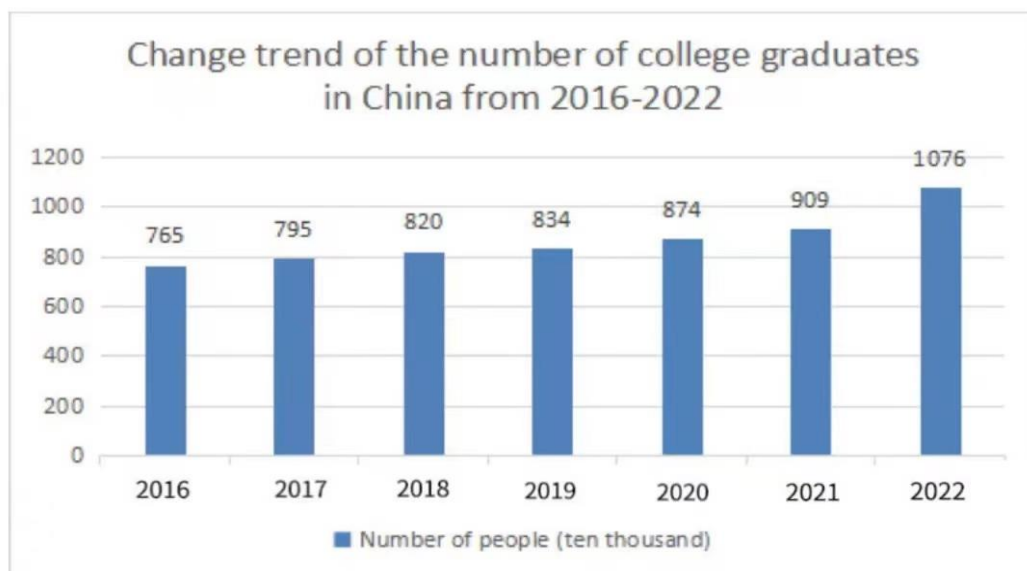
Fighting the epidemic has become the new normal of people's lives. Second, the impact of the epidemic on people's way of life, education and teaching still exists and will continue. (Long & Yu, 2022) believe that the "post-epidemic era" refers to the era after the COVID-19 epidemic passed in 2020. However, everything has not returned to the previous appearance, and the epidemic has not completely ended, but small outbreaks or seasonal return of foreign countries with various factors. An era that has a profound impact on the economy, politics and culture of a country or region. (Zhao et al., 2022) think of the so-called "age" after the outbreak, is refers to the outbreak in the country under basic in a controllable state, but the foreign field to the influence of reflux and seasonal epidemic is still repeated or small risk of outbreaks, and to the people's consumption habits, economy, culture, education and so on various aspects have a profound impact. At present, China is in the post-epidemic era, and as the epidemic situation in foreign countries is still not under control, China will be in the post-epidemic era for a long time.

In general, about the outbreak era definition, relevant domestic scholars view the same, there is no big difference, agreed that the outbreak era is in the present form, the state of the union as a whole for a controlled state, but are influenced by various factors, there are still a small local or foreign seasonal repeatedly reflux, etc., the outbreak has no real completely ended, Our lives, economy, education and culture will be affected by the post-pandemic era for a long time.

4.2 The impact of the post pandemic era on the employability skills of college students

(Luo, 2020) proposed that the impact of the epidemic on employment is mainly reflected in the reduction of recruitment of micro, small and medium-sized enterprises due to difficulties in survival, new entrepreneurial projects can meet the needs of the people, and the Internet has become a new model to promote employment. Since December 2019, the COVID-19 outbreak has become an emergent public crisis with global influence, which has seriously affected the employment of college students. In 2021, under the background of the national general high state, the

employment situation of college students is worse. In 2022, the total number of fresh college graduates in China exceeded 10 million, another record high. Due to the impact of the epidemic on the economy and the increase in the number of graduates, it is more difficult for college students to find employment. At the same time, seeking the balance of person-post matching puts forward new and higher requirements for the employment ability of college students. In the post-epidemic era, the number of university graduates reached 10.76 million, which increased too fast compared with the same period last year.



Figures 19 Image Data source: Ministry of Education, China Academy of Industry and Commerce

Statistics from the Ministry of Education show that the number of college graduates will reach 10.76 million this year, an increase of 1.67 million over last year and a record high in both scale and increment. When graduation season overlaps with the pandemic, the job situation is even tougher.

The impact of the post pandemic era on the employment of college students, combined with relevant literature, has been found to be mainly focused on two levels: students and employers. At the student level, students face increasing

employment pressure, weak employment competitiveness, narrow employment concepts, and negative employment intentions. According to a study by (Hu, 2021), under the impact of the epidemic in 2020, the majority of 2020 college students were unable to find efficient and high-quality employment, resulting in a group of slow employment and unemployed college students staying until 2021 to compete for "job opportunities" with 2021 graduates, resulting in increased employment pressure and reduced employment opportunities for 2021 graduates. In the post pandemic era, there are many employment problems for college students, and the employment situation is not optimistic. For example, 'slow employment' tends towards 'iron rice bowls'. At the employer level: Under the impact of the post pandemic, recruitment in small and medium-sized enterprises has decreased, the number of graduates has increased, job demand has decreased, and recruitment methods are not diverse and comprehensive enough. (Zhang & Chen, 2021) pointed out that in the post pandemic era, college students face three challenges in employment: fierce job competition, limited job opportunities, increased demand for talent cultivation quality, and a shortage of versatile talents. Furthermore, corresponding strategies are proposed from the government, universities, and students levels. The recruitment form and effectiveness are not ideal. (Lv & Chen, 2022) A series of work paths are proposed to address the severe employment situation faced by current college student employment work, changes in graduate mentality, and inadequate online recruitment. This will provide new ideas, methods, and ideas for college teacher employment guidance work, reduce the impact of the epidemic on college student employment work, and provide guarantees for college student employment guidance work in the post epidemic era.

4.3 Factors affecting the employability skills of college students in the post pandemic era

Research has found that the expectations of employers do not match the skills mastered by graduates. However, most studies consistently indicate that graduates still lack the market driven employment skills necessary to succeed in the 21st century workplace (Tushar, Sooraksa, 2023). In the global knowledge economy,

technology and innovation are key to developing corporate competitiveness, and new value generation processes and productivity sources inevitably require changing trends in employability. In such an economic environment, creating and maintaining employment largely depends on employability factors, namely the ability of enterprises to create job opportunities with well-trained, autonomous, loyal, and satisfied employees who can innovate and create more added value (Martínez-Cerdá et al.,2020).Therefore, this article analyzes the determinants of employment success in the context of digitalization of higher education and subject digitization, which leads to insufficient competitiveness in employment.

In recent years, research has found that career motivation belongs to one of the five structures related to employability tendencies (Martínez-Cerdá et al.,2020),and understanding one's own career motivation is also a part of employability (Dascalu et al.,2017).Positive career motivation can enhance a sense of goal identity and career identity.

Studies have shown that work motivation indicators have a positive and significant impact on job performance(Forson et al.,2021),and refocus students' efforts on self-development and enhancing professional identity (Bennett et al.,2020).The enhancement of professional goal identification or job identification will drive us to strengthen our job seeking practice,understand the relevance of the target profession, and conduct job analysis.

Some studies suggest that the level of employment depends on the work to be done (Espinoza et al.,2020).Job analysis is defined as the process of determining the tasks, responsibilities, and skills required for developing a job description, which outlines the work to be done and the specifications of the people who will be involved in the work. Through job analysis, organizations can predict employee performance; And how to reward them through their performance. In addition, employees are aware of the organization's expectations for their performance and how they will be compensated(Khtatbeh,et al.,2020).Job analysis is the foundation for standing out in the job search process. After conducting a task analysis, we will organize our own human

capital accumulation situation in a targeted manner based on job positions, responsibilities, content, requirements, etc.

Studies have shown that the measure of success is the degree to which a person's human capital status matches the demands of the labor market (Toner, 2017). The positive relationship between education level and employability in the knowledge economy has been fully compared in empirical literature on human capital (Espinoza et al., 2020). In addition, when individuals have to cope with stressful situations, social capital, especially social support, is crucial, such as unemployment or job seeking in a competitive environment (Dascalu et al., 2017). Therefore, human capital is conducive to increasing individual job competitiveness and enhancing job confidence.

The creation and maintenance of employment largely depend on employability factors, that is, the ability of enterprises to utilize well-trained, autonomous, loyal, and satisfied employees to create job opportunities. These employees are able to innovate and create more added value (Martínez-Cerdá et al., 2020). Therefore, it is necessary to combine individual human capital situations to explore targeted employment opportunities that are suitable for oneself, increase the matching degree with target positions, and actively address the challenge of diversified job search methods, that is, obtaining job information through a single channel increases the difficulty of information selection; Graduates are unfamiliar with online recruitment, have weak job information processing skills, and lack online exam taking skills (Guo, 2021).

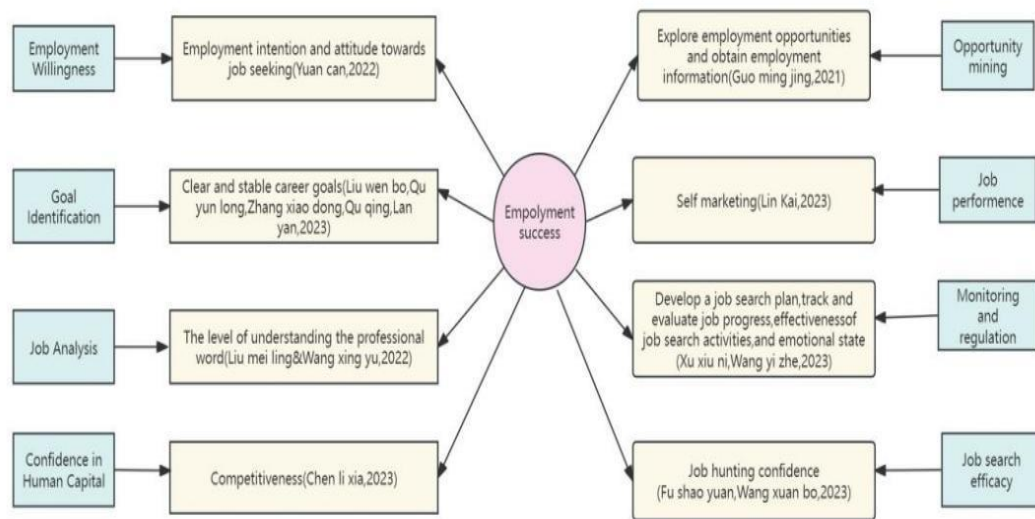
After obtaining some job opportunities, it can better promote ourselves and enhance job performance. According to existing research, a highly employable individual should have adaptability, career self orientation, self entrepreneurial behavior, self marketing, and self commodification (Dascalu et al., 2017). In the employment ability of college students, job seeking ability is an indispensable factor, which is related to the degree to which college students express their basic qualities related to qualified citizens in modern society and professional abilities related to future careers before

employment. At the same time, this ability is also related to the accurate judgment of the employment situation and the degree of grasp of employment opportunities by college graduates during the job search process (Lin, 2023).

However, the process of job application always encounters some difficulties and setbacks. At this time, it is necessary to self-regulate, maintain an optimistic and positive attitude, face setbacks with resilience, and be able to readjust the state before continuing to participate in job search or work (Espinoza et al., 2020). A study has suggested that simultaneously perceived employability may affect their proactive career behavior, and compared the career performance of employees with higher and lower FWSS. The results showed that employees with higher FWSS actively acquire more resources to achieve career aspirations and actively regulate their career behavior, while employees with lower FWSS have insufficient awareness of the gap between their current self and expected future self, and negatively regulate their career behavior. Therefore, self-regulation has an impact on career behavior (Hong et al., 2023).

In the process of self-regulation, it also enhances confidence in job seeking, obtains a high sense of self-efficacy, and helps to continuously enhance employability or improve work efficiency (Espinoza et al., 2020). At the same time, a rich social environment is considered to be conducive to self-efficacy in job seeking and has become the main driving factor for employment (Dascalu et al., 2017), therefore, it is necessary to pay attention to the pre-employment social environment adaptation of students.

In summary, it can be concluded that the factors that affect employment success mainly include the following eight dimensions, as shown in Figure 18:



Figures 20 Factors affecting employment success Source: Created by the authors

Regarding the factors that affect the employment of college students, researchers mainly start from the student level and sort out the factors that affect their success in employment through literature review. Combining authoritative career theory and the actual employment process of college students, they construct a diagnostic model for employability, which is used to support teaching design and promote the improvement of students' employability skill.

4.4 Characteristics of the employment situation of college students in the post epidemic era

Scholars have generally agreed on the characteristics of the employment situation for college students. From the perspectives of universities, enterprises, and students, there are generally several characteristics: firstly, the employment concept tends to be "iron rice bowl"; Secondly, the lack of practicality in talent cultivation in universities; Thirdly, due to the impact of the epidemic, there is a mismatch between supply and demand in the job market; Fourthly, students lack more precise employment guidance; Fifth, there have been dual changes in job search models and recruitment

forms by employers;Sixth,recruitment information urgently needs intelligent services. For example,(Zhu,2021)conducted a research and analysis on the current employment situation and trends of graduates majoring in economics and management at their respective schools,with a focus on analyzing the current difficulties faced.Based on this,further countermeasures and suggestions were proposed. In the post pandemic era, the employment situation of graduates majoring in economics and management has led to a decline in the number of people taking the postgraduate entrance examination, the World War II entrance examination, and the number of people going abroad, with a high popularity of taking the civil service entrance examination.(Guo,2021)Characteristics of the employment situation of college students in the post pandemic era: the phenomenon of "slow employment" shows a reverse growth trend; Under the background of popularization of higher education, the surge in employment has intensified the challenge of employment;Graduation destination marketization increases market dependence;4)Personalized student needs urgently require precise guidance;The informatization of job recruitment urgently requires intelligent services.(Wang et al.,2022)The research analyzes the employment situation of undergraduate graduates in China based on the Employment Bluebook: China Undergraduate Employment Report in 2021 published by MyCOS Research Institute.The proportion of undergraduate graduates pursuing postgraduate studies in 2020 has increased;The implementation rate of graduation destinations for 2020 undergraduate graduates has decreased; The focus of employment for undergraduate graduates continues to sink, mostly leaning towards returning to their hometowns for employment.(Yuan,2022)pointed out that in the post pandemic era,the employment situation faced by college graduates is complex and severe,with more intense job competition,changes in job search patterns for graduates, and an increase in "slow employment".Based on the heavy task of ideological and political education, the employment guidance work in universities faces a long way to go,the shortcomings of traditional employment guidance services in universities, and significant changes in employment trends and channels. (Long & Yu ,2022)Research has pointed out that in

the post pandemic era, the employment environment for graduates is reflected in the increasing number of graduates year by year;The number of unemployed people in various industries is constantly increasing;The impact of overseas students on the domestic job market.

4.5 Strategies for college students' employability skills in the post epidemic era

(Cao & Yi,2020)By elaborating the concept,significance and implementation path of precision employment, this study further expands the connotation of precision employment, focuses on accurate information and accurate ability,and provides effective guidance for college students' employment in the post-epidemic era.(Xue et.al,2021)This study analyzed the influencing factors of college students' employment from the levels of government,university enterprises and individuals through hypotheses,questionnaires and models, aiming to provide better employment guidance for college students in the post-epidemic era.(Wanget.al,2022)Based on the analysis of the employment situation of Chinese graduates in the post-epidemic era,a questionnaire survey was conducted on graduates of the Class of 2020 and 2021 in G University,aiming to deeply explore the employment situation of college students under the background of normalized epidemic prevention and control with college students as the main body.(Yuan,2022)Based on the analysis of the current employment situation and characteristics of college graduates in the post-epidemic era,pointed out that the current employment guidance work in colleges and universities is faced with a long way to go in ideological and political education, the lack of traditional employment guidance services in colleges and universities, and major changes in employment trends and channels.(Long & Yu,2022)By analyzing the employment environment and employment difficulties of graduates under the background of the post-epidemic era, we found problems,explored new ideas for guidance of counselors to guide graduates' employment,provided accurate employment services for graduates, and contributed to social stability.(Liu &,Wang,2022)Based on the data related to the employment problems of college students in finance and economics universities, multiple logistic regression was used to analyze the employment competitiveness of college students and its

influencing factors.(Lv & Chen,2022)in view of the current college students are faced with the severe employment situation of graduates,attitude change, imperfect network recruitment work put forward a series of problems such as path, for employment guidance work of university counselors output new ideas, new methods and new idea, reduce the influence of epidemic on college students' employment,To provide a guarantee for the employment guidance of college students in the post-epidemic era.(Jing et.al,2022)According to the principle of person-post matching, construct the evaluation index system of college students' employability and conduct empirical research.Through the fuzzy comprehensive evaluation of college and employers to graduate evaluation of the difference analysis.(Zhao et.al,2022)through studying the characteristics of the outbreak era social entrepreneurship education and employment law of development, after the outbreak period of employment, entrepreneurship,and studies the existing problems in the construction of teaching material,by putting forward countermeasures and Suggestions, as employment,entrepreneurship education in colleges and universities in the outbreak time feasibility of the model and the effective references for the development of employability skill.

4.6 Research on college students and employability skills in the post epidemic era

(Cao & Yi,2020)Research by analyzing the problems existing in the current information accurately, proposed in view of the students and the model of structural quality and ability of unit of choose and employ persons, and put forward the precise problems according to ability ability to achieve accurate specific steps, the research idea is clear, has guiding significance to the further research.(Xue,et.al,2021) research using relevant software, build the factors that affect college students' employment structural equation model, and the reliability and validity of the model, the relevant variables, correlation coefficient analysis of the inspection, its research methods and research tools of choice is at the same time the same other research appears more authoritative,typical,scientific.(Yuan,2022)Colleges and universities should also explore the mode of "Internet & career guidance" through multiple channels. In the information

age, it is necessary to give full play to the functions and advantages of the Internet and inject new elements into the traditional employment guidance work. To coordinate with education departments at all levels to design a full range of career guidance live classes; Create the university's own employment service APP for direct communication among schools, employers and graduates; Establish "employment counselor management service platform", give full play to the role of college counselors, and conduct in-depth, specific and multi-level "one-to-one" employment assistance to avoid the employment guidance become a formality. (Zhang & Tan, 2022) The introduction of research methods has a clear idea; The visualization analysis of the research results provides favorable guidance for the subsequent research, which is conducive to a better grasp of the research direction, research trend, research focus, research difficulties and existing research gaps. (Liu & Wang, 2022) The reliability and validity of the questionnaire were tested. Factor analysis is carried out on the designed scale to ensure that the scale can truly reflect the composition of employment competitiveness of finance and economics college students, and make the research results more convincing, authoritative and scientific. (Lv & Chen, 2022) The path mentioned in the study: using network cloud services to optimize the employment process of graduates. In the post-epidemic era, many enterprises still use network interview for talent selection, which cannot complete the traditional three-party agreement signing process. Many colleges and universities make full use of network resources, under the premise of ensuring the completion of audit, management and contract, constantly develop and optimize the network system, and strive to realize the "one-click contract" between employers and graduates, and realize the "remote guidance" of college graduates. In addition, the development of mock interviews, job-matching tests and other modules can help graduates better choose careers and strengthen their core competitiveness "in the cloud". Counselors should make full use of the network, explore the employment service mode of the new era, actively communicate and take active actions, make full use of existing resources to create network interview room and contract service room for graduates, etc., to provide conditions for the employment of

graduates. Research work thinking link employment work network system "intelligent" development has become a trend, innovative, and provides a new idea for subsequent research. (Jing et al., 2022) research perspectives is novel, attempts to and from the aspects of colleges and universities and unit of choose and employ persons, people is based on the analysis for the matching of perspective, to build evaluation system of college students' employment ability and empirical comparison and case analysis, so as to college students' employment ability increment, provide basis and reference for the development of talents training in colleges and universities. Subsequent studies will also be embedded in the assessment of students' employability. The selection of each evaluation index in this study is determined by reference to previous studies, which is grounded and supported. The source and processing design of the data are scientific and rigorous, which makes the whole research very empirical and strongly supports the research results. And the difference of research results is analyzed, the whole study is very complete and comprehensive. The research combed the research status of this topic at home and abroad very clearly, and provided a clear direction for future research.

At present, the course of career development and employment and entrepreneurship planning has received social attention. Some schools have also begun to pay attention to the career planning content of college students in the classroom, and various competitions, challenges, and other activities are becoming increasingly rich. However, these contents are often limited to the campus and do not integrate the extracurricular practices of college students, nor are they aligned with employers, resulting in the theoretical level of career development and entrepreneurship and employment planning for college students. Based on interviews with other teachers, it is generally agreed that there are many problems with the current curriculum of employment guidance, and relying solely on the classroom may not achieve ideal guidance results. The employment rate of schools is related to the construction of disciplines, the development of majors, the development of students, and the development of students' families. Therefore, future research will focus on using the

employability diagnosis system to develop a role-play-based learning and workshop teaching model based on e-learning,innovate practical teaching design for improving employability skills, and conduct scenario simulation and case analysis.

4.7 Conclusion

At present, domestic policies and regulations related to the employment of college students are very sound,and many measures and related preferential policies have been introduced to promote the employment of college students.Although the government has some influence,it is not the main determining factor.The country is also providing support to enterprises at all levels to increase their recruitment efforts for fresh graduates.Although enterprises have a certain demand for talent market, some enterprises have also reduced their recruitment positions due to the impact of the epidemic.This is also a factor that affects the employment of college students to some extent,but it is not a decisive factor that affects the employment of college students.At present,there is still a phenomenon in the employment talent market where enterprises are unable to recruit suitable talents and students are unable to find suitable positions.The reason for this is that there is a certain deviation in students' employment concepts under the influence of the epidemic.According to relevant surveys of employment intentions of college graduates,graduates are enthusiastic about taking postgraduate entrance exams,civil servants,and public institutions. During the golden period of graduates' employment every year, they face many school recruitment positions,and students' enthusiasm for applying is generally not high,The employment vision is generally high,so some companies cannot recruit students,and students also face a long cycle of not finding suitable positions.Although some students have a willingness to work in enterprises,due to their relative lack of employability and professional experience, it is also difficult to find suitable positions. Therefore, regarding the factors affecting the employment of college students, more attention should be paid to analyzing them from the student level, truly exploring new teaching models and forms through innovative educational practices both on and off campus,relying on certain educational technology media to achieve the connection between

schools, teachers, students, and the job market, and closely integrating theoretical knowledge with practical activities related to improving employment skills in a timely manner. Enable students to receive market feedback in a timely manner, enable enterprises to timely understand changes in student talent literacy, and provide guidance on improving employment skills for students. Teachers can also provide more accurate employment guidance to students in a timely manner based on feedback from the enterprise in the job market. Schools can also timely adjust and update talent training plans, curriculum construction, and provide relevant educational technology support for targeted development based on the needs of the enterprise market.

Table 3 Summarizes the factors that affect employment success

Influence factor	Embodiment
Employment willingness	Employment intention and attitude towards job seeking
Goal identification	Clear and stable career goals
Job Analysis	The level of understanding of the professional world.
Human Capital Confidence	Competitiveness.
Opportunity mining	Explore employment opportunities and obtain employment information.
Job performance	Self marketing ability.
Monitoring and regulation	Develop a job search plan, track and evaluate job progress, effectiveness of job search activities, and emotional state.
Job search efficacy	Job hunting confidence.

5. Employability skills

5.1 Definition of employability skills

The concept of employability was first proposed by Beveridge, a British economist, and became a research hotspot in the field of human resource management in European and American countries in the late 1950s (Sun,2019).Some studies have pointed out that Chinese scholar Zheng Xiaoming believes that the employability of college students refers to the ability of college students to realize their employment ideal, meet social needs and realize their own value in social life through knowledge learning and comprehensive quality development (Zhu,2021).

As more and more scholars pay attention to higher education, the study of college students' employability has gradually become a hot field, and the definition and understanding of its concept are also very different. After combing and integrating relevant literature, it is found that the current definition of employability is mainly from

four perspectives. First, it is defined from the perspective of individual relevant ability. For example (Feng et.al,2017; Yang &Fan,2017)et al.(Wang,2018; Song,2018;Osmani et.al,2018;Fang,2019;Sun,2019;Huang & Wei,2019;Guo & Chen Jing,2021;Zhu,2021)agreed that employability refers to the knowledge, skills and values needed by individuals to acquire, maintain and develop jobs; Second, employability is defined from the perspective of external factors that affect individuals' access to employment opportunities, such as (Wang,2018;Lin,2018;Gao &

Zhao,2019;Hao,2020;Bennett et al,2020;Jing et.al,2022)and other scholars,from the perspective of labor market demand, believe that the employability of college students generally refers to the comprehensive ability and quality of college students to achieve their own employment goals, meet social needs, and realize their own value. Thirdly, from the perspective of dynamic development, some scholars believe that employability is a dynamic and sustainable development concept, such as (Zhang et.al, 2017;Xie,2017;Li,2017;Zhang,2020;Chen,2021);Fourth,there is no clear definition, or we should continue to follow the previous definition of employability(Chen &

CAI,2018;Chadha &Toner2017;Hua,2020);Or put forward a new research perspective based on the previous definition of employability(Chadha & Toner,2017;Wang,2018).

The term "employability skill" has changed dramatically over the past 100 years since it was coined.Different scholars have different understandings of the employability of college students.From the above research, it can be seen that most scholars prefer to define the employability "from the perspective of individual relevant ability",and the ability is the fundamental and internal cause.The improvement of knowledge,ability and quality can promote students to obtain and maintain career opportunities, promote career development, and realize personal value. Therefore, personal related ability is always the fundamental factor affecting the improvement of employment ability. And from the Angle of two "employment ability is to meet the labor market,social demand, adapt to the integration environment" this view more from external factors influencing individual obtain employment opportunity to analyze, if students the ability to relate to people is the internal cause, then from the labor market, social aspects of the factors such as belong to influence the student's employment ability to improve the external cause.Therefore, the research Angle of Angle two is to meet the needs of the job market and society, and adapt to the environment ",which is relatively single and one-sided, and does not grasp the fundamental core;And Angle three "think employability is dynamic, sustainable development change"this view is also representative.Era in the outbreak, the employment competition is intense,the Labour market to talented person's demand is higher and higher,the new economy, new formats have sprung up,for talents' knowledge, ability, quality put forward the more strict requirements, only the dynamic ability literacy, knowledge update skills,can adapt to the economic development of employment market demand change, advancing with The Times.Therefore,from this perspective, employability is a sustainable and dynamic development,which is also a research focus that we need to pay attention to at present. Although the view of "no clear definition" in Angle 4 is consistent with some previous research views, scholars put forward their own research perspectives.For example, (Wang, 2018) proposed that the current employability research lacks practical

innovation mechanism, which is in line with the current actual research situation, (Deesha Chadha and James Toner, 2017) believes that it may be beneficial to jointly study the definition and discourse of employability in order to formulate a definition applicable to national higher education, but the lack of innovation does not provide new thinking for subsequent research on employability, which is not conducive to the development of subsequent research.

Table 4 Definition of Employability skill

Author	Definition	Category
(FengHuimin ,Xiong Gan,Liu Yanjun,2017)	From the perspective of pedagogy, this paper clarifies the relationship among knowledge, ability and quality, and holds that the employment ability of college students refers to the ability of college students to obtain and maintain career opportunities, improve in career development and cope with career changes.	
(Yang Zhihui, fan Xin, 2017)	The employment ability is that an individual can find a career that matches him and obtain certain development ability in the process of work. That is to say, individuals can apply their accumulated knowledge and skills properly in the work process to minimize conflicts and obtain a sense of self-efficacy	Acquire, maintain and develop the knowledge, skills and value required
(Gong Xiaohui, 2017)	It is pointed out that the domestic concept of employability is the "general employability" for new graduates and other new entrants, which is summarized by ata in combination with the	by the work

Author	Definition	Category
	<p>basic meaning of employability. It refers to the basic ability and quality that can obtain initial employment, maintain employment and be competent for their own work after employment. The general employability proposed here excludes the differences in professional knowledge and skills, and is a test of the general employability of employees.</p>	
(Guo Xin, 2017)	<p>The employment ability of college students is the sum of the externalized personality traits such as professional employment ability, employment personality orientation, social coping ability and employment development ability that college students should possess to obtain employment opportunities through learning and practice. The employment ability of college students is a comprehensive ability, which includes not only the value of personal human capital, but also the ability to transform the value of personal human capital. It plays a vital role in the survival and development of college students.</p>	
(Li Fei, Yang Wenjian, 2017)	<p>The employment ability of college students refers to the collection of a series of abilities and qualities displayed by college students in the process of applying for, developing and changing careers</p>	
(Wang Feng,	College students actively seek and	

Author	Definition	Category
2018)	successfully obtain ideal jobs suitable for their own qualification level, and can maintain and be competent for the job. When necessary, they can successfully change the collection of a series of knowledge, skills, abilities and qualities required by the job.	
(Song Qiming, 2018)	It is clear that employability is a developing concept, and researchers do not have a unified definition of it. Some define it from the perspective of individual related ability, and some define it from the perspective of combining individual related ability with external factors that affect individual access to employment opportunities. The more accepted definition is "the ability to obtain initial employment, maintain employment and obtain new employment when necessary".	
(Mohamad Osmaniet.al 2018)	Employers all over the world require MIS graduates to have a professional degree and the ability to demonstrate a series of interpersonal skills. Employment skills refer to the skills, knowledge and attitudes required to obtain a job and perform well in the job, which in turn means positive results for both the individual and his employment organization.	
(Fang Di, 2019)	Employability refers to the ability to obtain and maintain work. It refers to the basic ability and quality to obtain initial employment, maintain	

Author	Definition	Category
	<p>employment and be competent for the job after employment. It also includes the ability to obtain employment opportunities and self-regulation, as well as the ability to continuously improve oneself in this occupation.</p>	
(Sun Baoying, 2019)	<p>The ability and quality of college students to obtain employment, maintain employment, complete work requirements, obtain new jobs when necessary, and realize personal potential and life value through employment.</p>	
(Huang Ruifeng, Wei Jinming, 2019)	<p>Employability refers to the ability of an individual to engage in one or more jobs. The employability of college students refers to the ability of college students to find suitable and competent jobs. In a narrow sense, it refers to the ability to apply for jobs.</p>	
(Guo Xixi, Chen Jing, 2021)	<p>The ability of college students to obtain their own ideal job through the learning of knowledge and skills training during the school period is the accumulation of knowledge and the cultivation of comprehensive quality during the school period, and the ability to combine the theoretical knowledge and practical skills of the major they studied.</p>	
(Zhu hailing, 2021)	<p>The basic skills that an individual needs to possess when looking for a job are also the endogenous driving force to maintain better work and achieve greater performance.</p>	

Author	Definition	Category
	<p>College Students' employability generally refers to the integration of knowledge, skills, attitudes, personal qualities and other elements formed by students' self-study and school training during the school period.</p>	
(Wang Chunsheng, 2018)	<p>It is put forward by college students to adapt to various demands and corresponding changes in the social employment market. The employment ability of modern college students generally refers to the comprehensive ability and quality of college students to achieve their own employment goals, meet social needs and realize their own values, which is specifically reflected in whether the orientation of College Students' career planning is clear, whether the professional knowledge and skills they have mastered are solid and excellent, whether the employment concept is correct, and whether they have practical experience and ability to adapt to employment positions.</p>	<p>Labor market demand; Labor and market</p>
(Lin Wenjun, 2018)	<p>The perspective of examining the employability is more focused on students and universities, and the responsibility and role of enterprises (employers) in the development and promotion of the employability of college students are diluted due to the wide range of employment units and numerous positions. The main body and responsibility of improving</p>	

Author	Definition	Category
	<p>the employability of college students are more clear, and due to the participation of enterprises (employers), the practical characteristics are more distinct and targeted.</p>	
(Gao Jing, Zhao Chaohui, 2019)	<p>Employability refers to the complex of individual professional ability, group ability, innovation ability and matching professional quality that can adapt to and integrate into a variety of social and cultural environments and complex and changeable workplace environment, and can meet the needs of specific economic and industrial development. Ability and accomplishment to adapt to the environment and meet the needs.</p>	
(Hao Jianwu, 2020)	<p>The employment ability of college students is the various abilities and qualities that can meet the employment needs, realize the ideal of life and reflect the value of life.</p>	
(DawnBenne tt, et.al, 2020)	<p>Employability and its measurement of higher education economic uncertainty, the increase in the number of graduates and the rise in the cost of higher education research have helped to keep the employability of graduates in line with higher education policies in many countries. The study defines employability as having "dynamic adaptability", which is consistent with the labor market to which students transition.</p>	

Author	Definition	Category
(Jing Lixian, Ma Hongbao, Wang Hanchen, Ma Chundi, 2022)	The employment ability of college students refers to the collection of a series of knowledge, skills, abilities and qualities required by college students to actively seek and successfully obtain an ideal job compatible with their own qualification level after properly assessing their own conditions and labor market demands, and to be able to maintain and be competent for the job, and to successfully change jobs when necessary. It mainly includes the professional knowledge, skills, abilities and qualities that college students should have.	
(Zhang Liling, Chen Haiju, Guo Lixin, Chang Lisheng, 2017)	The employment ability of college students essentially refers to the basic working ability formed by college students on the basis of knowledge learning and training, and the corresponding professional skills. Employability is essentially a long-term concept and a sustainable concept.	Sustainable and dynamic concept
(Xie Fang, 2017)	It is believed that the employability of college students refers to the ability of college graduates to form basic working ability, master professional skills and have certain job-hunting skills and skills through knowledge learning and training during the school period. The employability is a long-term and sustainable concept	

Author	Definition	Category
(Li cunling, 2017)	The employment ability of college students is defined as the sum of the ability of college students to meet the screening criteria of specific organizations and continuously create performance for them. This ability includes not only theoretical knowledge, but also social experience and personality traits. This kind of ability is acquired by college students through education and self-development, so that they have specific competitiveness in the talent selection of specific organizations	
(Zhang Xiaoling, 2020)	College graduates have the ability to obtain suitable jobs and maintain sustainable career development. In a certain sense, they also have the ability of self employment (Entrepreneurship).	
(Chen Zhuyuan, 2021)	Employability refers to the knowledge, skills and characteristics possessed by individuals. The skills acquired by individuals after education can be cultivated. It is closely related to society, economy, culture and labor market. Its definition and meaning are dynamically developed.	
(Deesha Chadha and James To ner, 2017)	There are many related but slightly different views on the definition of employability, and the definition of employability is constantly changing. Therefore, there is no consensus on the definition of employability. It is believed	No clear definition, other angles

Author	Definition	Category
	<p>that it may be beneficial to jointly study the definition and discourse of employability, so as to formulate a definition applicable to national higher education.</p>	
(Chen Lu, Cai Hanjing, 2018)	<p>The author agrees with the concept of employability put forward by British economist Beveridge in 1909, which specifically refers to "the ability to find a job for an individual, continuously complete a job and achieve good career development".</p>	
(Wang Ligu, 2018)	<p>With regard to the employability of university graduates in China, many scholars pay attention to the connotation research and concept analysis of employability, while the practical research on employability is relatively scarce; More attention has been paid to the research on the paths and Countermeasures for improving the employability, and the research on the innovation mechanism for cultivating the employability is relatively less; At the same time, the long-term mechanism and feasibility study of employment capacity are relatively scarce.</p>	
(Hua Lanfang, 2020)	<p>It is believed that domestic and foreign scholars have not yet formed a unified, standardized and widely recognized definition of employability. The author agrees with the definition of employment ability by Zheng</p>	

Author	Definition	Category
	<p>Xiaoming, a Chinese scholar, and believes that the employment ability of college students refers to the ability of college students to realize their employment ideal, meet social needs and realize their own value in social life through the learning of knowledge and the development of comprehensive quality.</p>	

In general,(Chadha &Toner,2017)there are many related but slightly different views on the definition of employability,and the definition of employability is constantly changing, so there is no consensus on the definition of employability. Most scholars at home and abroad research on employability are mainly concentrated in the ability to relate to people, which is generally agree that the employment ability is refers to the personal gain, keep and development work of the required knowledge, skills, values, and we think that this view is more reliable, can draw lessons from, is still used in the outbreak era employability research status. However, a few scholars have a slight deviation from the perspective of the labor market.Therefore, in order to improve students' employability sustainably and dynamically,it is necessary to comprehensively analyze the fierce employment competition in the context of the normalization of the epidemic from both the aspects of workers and the labor market. Combining the views of different scholars and research institutions,the author believes that the so-called employability refers to the combination of abilities necessary to complete the task of "employment". Employability includes not only the ability to apply for a job, but also the ability to develop after employment. Specifically, it refers to the employability that college students pay attention to in the process of job hunting,such as collecting employment information,understanding the employment situation,locking the target occupation,self-promotion,accepting assessment,signing employment contracts and so on. Such as information processing ability,communication and coordination ability,self-

expression ability, opportunity decision-making ability and so on. Career development ability refers to the ability that college students need in the process of accumulating solid professional knowledge, excellent practical skills, better adapting to the society and reasonably planning life, such as learning ability, practical ability, adaptive ability, planning ability and so on. Of course, employment ability and career development ability are not independent and separated from each other, but two kinds of ability groups formed according to the different goals of career development of job seekers in different periods. They complement each other and are indispensable. Follow-up research should pay more attention to the study of college students' employability skills.

5.2 Composition of employability skills

In view of various domestic research conclusions on the composition and structure of college students' employability, in order to better clarify the core composition and structural characteristics of college students' employability, according to the recent five years of research results, this paper tries to preliminarily build a comprehensive analysis framework of college students' employability structure and its components.

Table 5 Composition of employability skills

Author	Category	Number of documents
(Zhao Min, Dong Yuanyuan, Zhao Guojun, Fan Lu, 2017) (Feng Huimin, Xiong Gan, Liu Yanjun, 2017) (Yang Zhihui, Fan Xin, 2017) (Guo Xin, 2017) (Lin Wenjun, 2018) (Wang Feng, 2018) (Sun Baoying, 2019) (Liang Xuling, Mei Yunlang, 2019) (Chen Lihong, 2019) (Huang Ruifeng, Wei Jinming, 2019) (Hao Jianwu, 2020) (Zhang Xiaoling, 2020) (Hua Lanfang, 2020) (Guo Xixi, Chen Jing, 2021) (Liu Hui, Zhang Dongrong 2021)	Professiona competence	15
(Zhao Min, Dong Yuanyuan, Zhao Guojun, Fan Lu, 2017) (Feng Huimin, Xiong Gan, Liu Yanjun, 2017) (Guo Xin, 2017) (Lin Wenjun, 2018) (Wang Ligu, 2018)	learning ability	14

Author	Category	Number of documents
(Wang Feng, 2018) (Zhu Yu, 2018) (Sun Baoying, 2019) (Liang Xuling, Mei Yunlang, 2019) (Huang Ruifeng, Wei Jinming, 2019) (Hao Jianwu, 2020) (Zhang Xiaoling, 2020) (Guo Xixi, Chen Jing, 2021) (Bao Bin, 2021)		
(Li Cunling, 2017) (Guo Xin, 2017) (Lin Wenjun, 2018) (Wang Liguu, 2018) (Wang Feng, 2018) (Zhao Min, Dong Yuanyuan, Zhao Guojun, Fan Lu, 2017) (Pan Bin, Zhang Jing, Liu Junfeng, 2018) (Zhu Yu, 2018) (Sun Baoying, 2019) (Liang Xuling, Mei Yunlang, 2019) (Huang Ruifeng, Wei Jinming, 2019) (Hua Lanfang, 2020) (Guo Xixi, Chen Jing, 2021)	Interpersonal communication ability	13
(Zhao Min, Dong Yuanyuan, Zhao Guojun, Fan Lu, 2017) (Pan Bin, Zhang Jing, Liu Junfeng, 2018) (Li Cunling, 2017) (Guo Xin, 2017) (Wang Feng, 2018) (Sun Baoying, 2019) (Chen Lihong, 2019) (Liang Xuling, Mei Yunlang, 2019) (Hao Jianwu, 2020) (Hua Lanfang, 2020) (Guo Xixi, Chen Jing, 2021) (Liu Hui, Zhang Dongrong, 2021) (Bao Bin, 2021)	Personality trait literacy	1 3
(Feng Huimin, Xiong Gan, Liu Yanjun, 2017) (Yang Zhihui, Fan Xin, 2017) (Li Cunling, 2017) (Guo Xin, 2017) (Wang Feng, 2018) (Pan Bin, Zhang Jing, Liu Junfeng, 2018) (Lin Wenjun, 2018) (Huang Ruifeng, Wei Jinming, 2019) (Liang Xuling, Mei Yunlang, 2019) (Guo Xixi, Chen Jing, 2021) (Bao Bin, 2021)	Ability to Apply for Jobs	11
(Zhao Min, Dong Yuanyuan, Zhao Guojun, Fan Lu, 2017) (Yang Zhihui, Fan Xin, 2017) (Guo Xin, 2017) (Lin Wenjun, 2018) (Wang Liguu, 2018) (Wang Feng, 2018) (Sun Baoying, 2019) (Huang Ruifeng, Wei Jinming, 2019) (Hao Jianwu, 2020) (Guo Xixi, Chen Jing, 2021) (Bao Bin, 2021)	<u>Innovation ability</u>	11
(Guo Xin, 2017) (Lin Wenjun, 2018) (Sun Baoying, 2019)	<u>Psychological quality</u>	8

Author	Category	Number of documents
(Chen Lihong, 2019) (Huang Ruifeng, Wei Jinming, 2019) (Hao Jianwu, 2020) (Guo Xixi, Chen Jing, 2021) (Bao Bin, 2021)		
(Wang Feng, 2018) (Huang Ruifeng, Wei Jinming, 2019) (Hao Jianwu, 2020) (Zhang Xiaoling, 2020) (Bao Bin, 2021)	<u>Practical ability</u>	5
(Lin Wenjun, 2018) (Wang Liguang, 2018) (Wang Feng, 2018) (Zhu Yu, 2018) (Zhang Xiaoling, 2020)	Problem-solving ability	5

The traditional human resource management process generally focuses on the KSAO of employees, namely, knowledge, skills, abilities and others; Now more and more companies begin to pay attention to the competency of employees, that is, the deep potential characteristics of individuals that can distinguish excellent employees from ordinary employees. Research and practice also show that competency can better predict the success of employees than KSAO. When evaluating the ability level of employees, it is more appropriate to adopt competency than KSAO. Therefore, the researchers classify according to the competency model theory and the classification of relevant scholars. Competence model is a competency structure combined with the requirements for excellent performance of specific positions, and it is an important basis for a series of human resource management and development practices (such as job analysis, recruitment, selection, training and development, performance management, etc.). McLeland believes that the competency model is "a set of related knowledge, attitudes and skills that affect the main part of personal work, are related to job performance, can be measured with reliable standards and can be improved through training and development". Guiford believes that "the competency model describes the motivation, characteristics, skills and abilities of people with excellent performance and those with average performance, as well as a set of behavioral characteristics required by specific jobs or levels.

In combination with the employment situation of vocational schools and the employment problems encountered by students in their actual work, researchers agree (Yang & Fan,2017;Huang & Wei,2019)on the classification of college students' employability. Based on the competency model theory, the employability is classified from motivation, characteristics, skills and abilities, as well as a group of behavioral characteristics required by specific jobs or levels.**Motivation level:**Emotion regulation ability,including social cognitive ability, self cognitive ability, self-management ability,and psychological adjustment ability,such as self-confidence,self-efficacy,achievementmotivation,responsibility, perseverance,etc.**Trait level:**Interpersonal communication ability,including communication ability, organization and coordination ability, team cooperation ability, conflict management ability and other relationship behavior management ability.**Skill level:**Professional technical ability, including professional knowledge, technology and practical application ability.**Ability level:** First, the ability to apply for a job, including career planning, collecting process information, interview skills and decision-making ability.The second is self-development ability, including learning ability, ability to analyze and solve problems, innovation skills and other self improvement abilities.The five dimensions of ability do not exist in isolation or simply add up, but interact to form a system of college students' employability skill(Yang & Fan,2017;Huang & Wei,2019),and jointly realize the smooth transition of college students from campus to the workplace.

5.3 Previous research about the methods to enhance employability skills

Based on research on the theme of "enhancing employability" in the past five years, the academic community has mainly adopted the following five representative approaches:

Type 1: Informationization construction of employment platforms, such as establishing employment information platforms and improving employment service systems(Wang,2018).In the countermeasures section, the author proposes to build a

competency training information system, establish an employment information platform and sharing mechanism (Wang ,2018).

Type 2 : Explore classroom design strategies under experiential teaching mode. (Liu & He,2017) began exploring the design of experiential employment guidance courses;(Liu & Pan,2017;Chen,2019;Liang & Mei,2019)and other researchers focus on practical teaching design to improve students' employment skills.(Lu ,2020)focuses on experiential curriculum design.

Type 3:Workshop format. Some articles have designed counselor employment consultation workshops with coaching skills as the core, which can listen to the coach's questioning awareness towards the counselor during the questioning process, help the counselor master the methods of conducting counselor employment guidance, and enable the counselor to better use coaching skills to carry out employment guidance work, thereby improving the competitiveness of students' employment, Enhancing the effectiveness of employment guidance(Deng & Liu,2020;Wang,2018;Fu,2018)and others have studied using employment workshops as carriers to improve the employability of college students; However, the workshop model advocated by scholars such as(Lin,2019;Wang & Feng,2019;Deng & Liu ,2020) to improve students' employability is still favored by most researchers. Some scholars, such as(Pan et al.,2021),and(Guo,2021),still pay attention to the research of workshop. Scholars such as (Lin,2021)are paying attention to the construction of teacher studios to improve students' employability.(Gu,2021)and several other studies have begun to respond to the call of the Ministry of Education to combine the ideological and political aspects of curriculum with the improvement of employment ability.In the ideological and political construction of the curriculum,explore the teaching reform of employment guidance courses based on "workshop teaching".The results indicate that combining the workshop teaching model can improve students' employment skills.

Type 4 : Simulated interviews based on situational learning.Research has pointed out that simulated interviews are an important practical link in the process of employment guidance,playing a crucial role in cultivating college students' language

expression ability,exploring their own advantages, and selecting employment routes (Zhang et al.,2020).

Type 5 : Practical activity design under the school enterprise cooperation model, such as some research utilizing the internet to build a virtual laboratory,using 5G internet companies to render scenes in real-time, enabling human-machine interaction between college students and frontline factories without leaving the school gate. While completing enterprise campus training, it can also save manpower and material costs, and not everyone must be on site (Zhu,2021).

5.4 Trends in research on employability skills

Through the analysis of the literature related to employment skills in the past five years, we found the following research trends:

Firstly, most studies have pointed out that current employment guidance lacks practical experience, such as(Yang & Fan,2017;Zhang et al.,2017)and(Xie,2017)mainly exploring the improvement of college students' employability from a supply side perspective; **Secondly**,research and design pay more attention to practice, such as(Lu,2020)emphasizing experiential curriculum design;**Thirdly**, there has been an increase in research on new media platforms for online simulated interviews, such as(Li et al.,2020;Zhang et al.,2020) using simulated interviews,(Geng,2020;Chen & Zhang,2020) using virtual interview technology to study employment skills;**Fourthly**, the research perspective is more innovative, comprehensive, and diverse.For example,(Lin,2021) began to focus on the construction of counselor studios to enhance students' employability,(Gu,2021)responded to the call of the Ministry of Education to combine curriculum ideological and political education with employment ability improvement, such as exploring the practice of career guidance curriculum teaching reform based on "workshop teaching" in curriculum ideological and political construction, such as(Bao,2021)and (Hu,2021)advocating the era of all media A study on the path to enhance the employability of college students in the context of artificial intelligence and smart education (Guo,2021);From the perspective of competency theory(Zhu,2021),and utilizing the advantages of the internet through the

school enterprise cooperation model to establish a virtual laboratory through the 5G internet(Zhu,2021),the analysis is conducted from the perspective of human resource development(Liu & Zhang,2021)demonstrating innovation;**Fifth**,focus on building models to enhance employability.Especially, some researchers have built their own models based on previous research models,which are highlights,such as(Tang,2019)the study on improving the employability of college students based on building models,(Chen,2019)the research on building models,developing platforms, and using media to enhance the employability of college students,which is also a need for further learning and improvement in future research.

5.5 Conclusion

5.5.1 Summary of employability definition

The term 'employability' has undergone significant changes in the past 100 years. From the above research,it can be seen that different scholars have different understandings of the employability of college students.According to the viewpoints of different scholars and research institutions, the author believes that employability refers to the combination of abilities necessary to complete the "employment" task. The term 'employment' here is not a specific action. It not only includes the process of finding a job, but also a series of development processes such as how to be competent, promoted, and transferred after joining the company. Therefore, employability not only includes the ability to apply for a job, but also includes the ability to develop after obtaining a job.

5.5.2 Summary of research trends in employability

Based on recent research, we have found that from 2017 to 2018, most scholars' research papers analyzed the current situation, reasons, and proposed theoretical countermeasures and suggestions, lacking practical empirical research; Since 2019, some research designs have placed more emphasis on practice, but there is still a lack of empirical research; Starting from 2020, the research perspective has become 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.

5.5.3 Summarize the ways to improve employability skills

Type 1. Informationization construction of employment platforms.

Type 2. Explore classroom design strategies under experiential teaching mode.

Type 3. Form of workshop.

Type 4. Simulated interviews based on situational learning..

Type 5. Design of practical activities under the school enterprise cooperation model.

5.5.4 Summarize the factors that affect employment success

One is employment willingness;

Secondly, target identification;

Thirdly, job analysis;

Fourth, confidence in human capital;

Fifth, exploring opportunities;

Sixth, job performance;

Seven is monitoring and regulation;

Eight is job search efficacy;

5.5.5 Conclusion the represents components of Employability that the researcher pick to use in this research.

First, the ability to apply for a job, including career planning, collecting process information, interview skills and decision-making ability.

The second is professional and technical ability, including professional knowledge, technology and practical application ability.

The third is interpersonal communication ability, including communication ability, organization and coordination ability, team cooperation ability, conflict management ability and other relationship behavior management ability.

Fourth, self-development ability, including learning ability, ability to analyze and solve problems, innovation skills and other self improvement abilities.

Fifth, the ability to regulate emotions, including social cognitive ability, self cognitive ability, self-management ability, and psychological adjustment ability, such as self-confidence, self-efficacy, achievement motivation, responsibility, perseverance, etc.

Overall, workshop teaching, situational employment guidance course teaching practice exploration, employment ability guidance information platform construction, and the construction of employment ability improvement models are still research hotspots. However, there is relatively little research on combining workshop teaching mode, situational teaching practice design, and employment ability guidance platform to construct teaching models using appropriate learning theories. Therefore, based on previous research, researchers will use the workshop teaching model to select role-play learning theories that are suitable for the topic of employability. Based on an electronic learning based employability diagnosis system, a role-playing learning and workshop teaching model will be developed. Based on the eight factors that affect the success of college students' employment, employability guidance courses and practical activities will be used to improve their employability skills.

CHAPTER 3

METHODOLOGY

In the era of e-learning, utilizing an employability diagnostic system to develop a model for enhancing employability based on role-play learning and workshop teaching, in order to improve the employability of Chinese college students. This study adopts a research and development design to test the independent variable "role-play learning and workshop teaching model". Based on the "employability diagnostic system", a "teaching model" is constructed to test whether it can improve the dependent variable "student employability" and whether there is a causal relationship. The research involves manipulating the "role-play learning and workshop teaching model", developing role-play learning and workshop teaching model, and explaining whether it can have an impact on "students' employability skills". According to the research objectives, the researchers divided the study into four phases.

1. Research Design
2. Participants of the Study
3. Research Instruments
4. Data collection
5. Data Analysis

1. Research Design

According to the purpose of the study, the researchers divided the study into four phases.

Phase I: Study the learning model conditions and requirements of role-play learning with workshop teaching, by using employability diagnostic system to enhance employability skills .

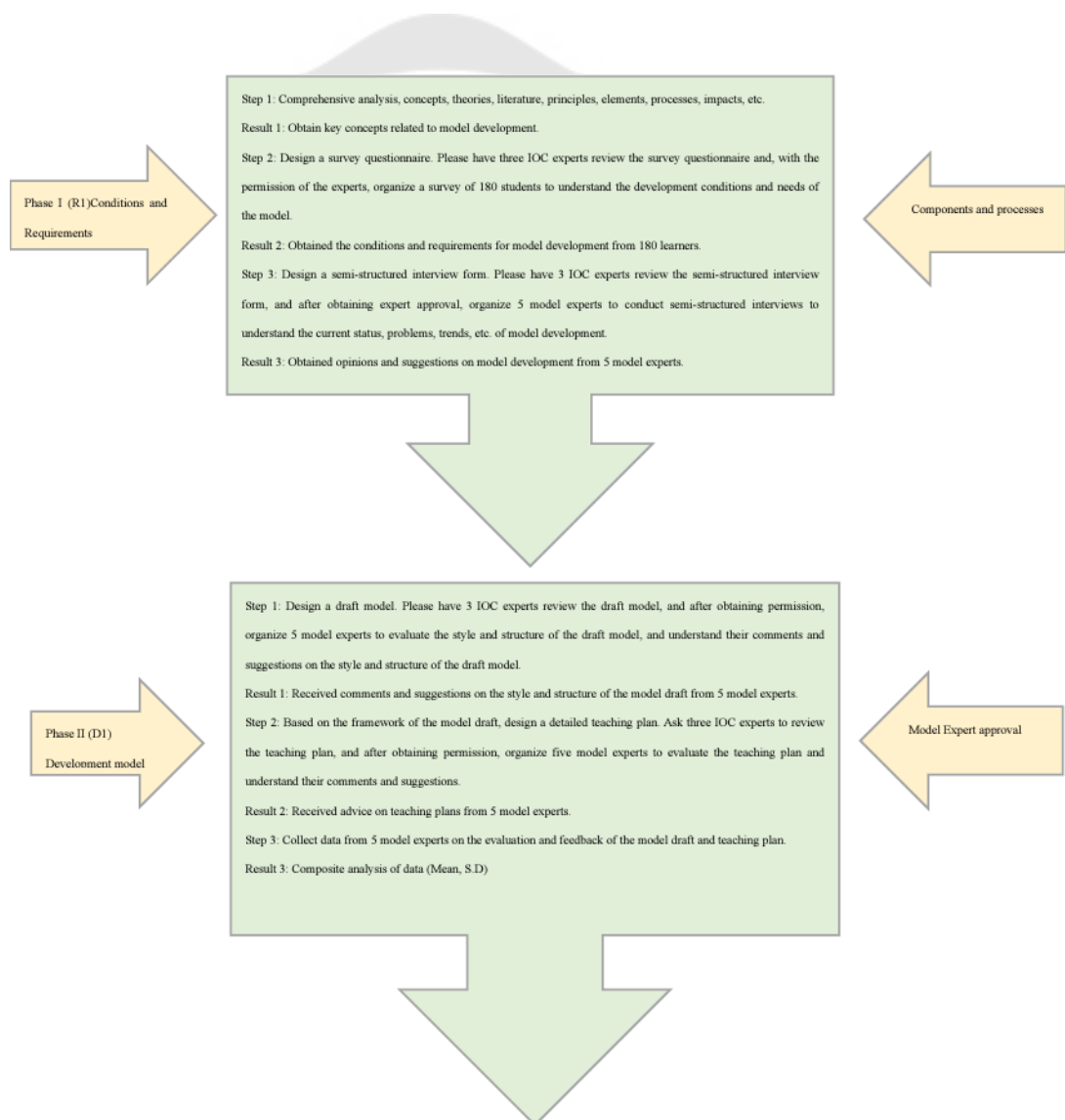
Phase II: Develop a role-play learning with workshop teaching model, by using employability diagnostic system to enhance employability skills .

Phase III: Study the effectiveness of role-play learning with workshop teaching model, by using employability diagnostic system to enhance employability skills.

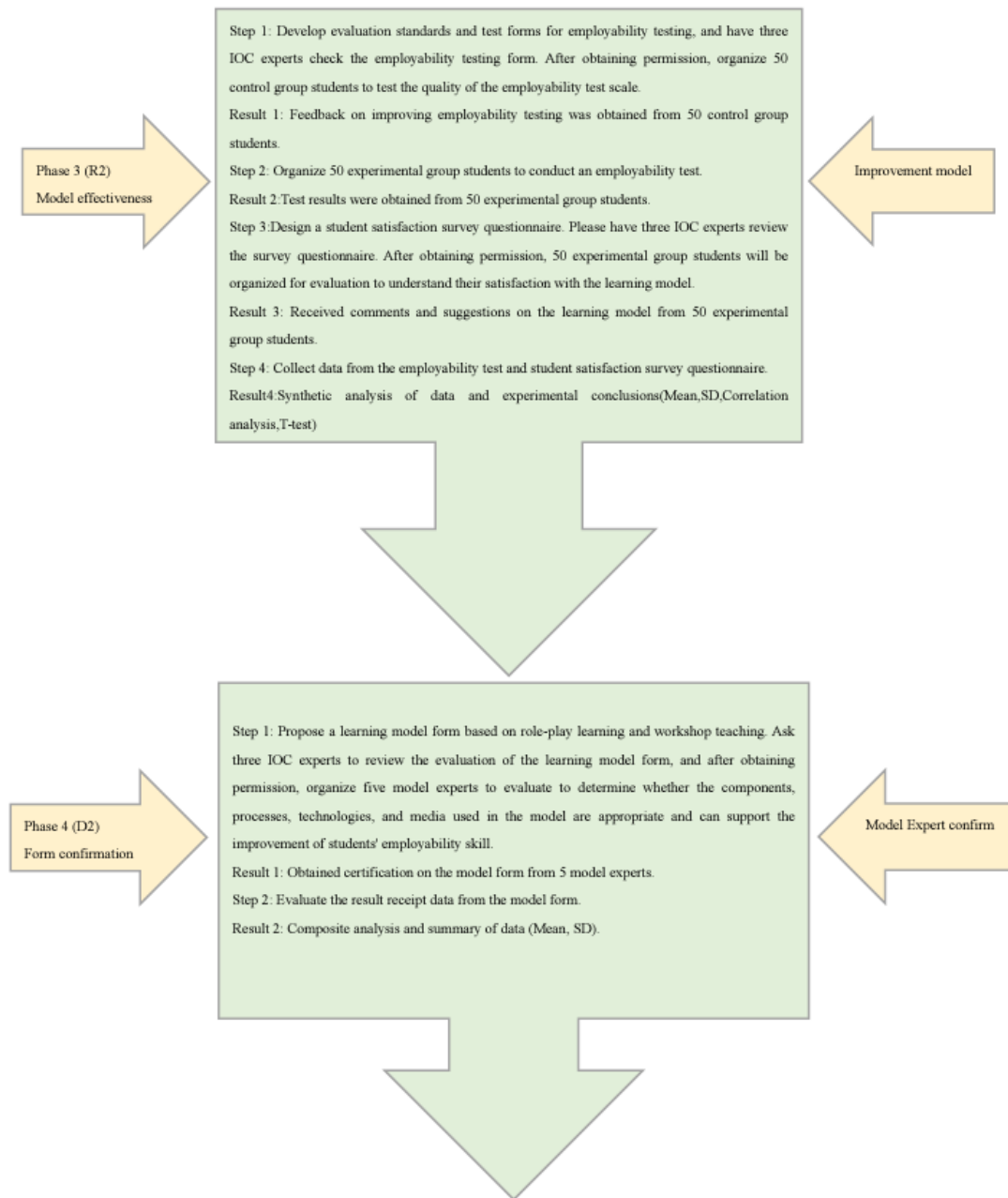
Phase IV: Confirm the form of role-play learning with workshop teaching model, by using employability diagnostic system to enhance employability skills .

Research phase process

All four phases can be represented in the following diagram.



Figures 21 The process of research phase I & phase II



Figures 22 The process of research phase III & phase IV

2.Participants of the Study

Phasel(R1):Study the conditions and requirements of role-play learning and workshop teaching model, by using employability diagnostic system to enhance employability skills.

The phase I study population

1)The population (students) studied in the first phase.The Chinese Vocational College, a college affiliated with Yunnan University of Finance and Economics in southwestern China, use employability diagnostic system technology to promote employability skills. The population is 625 undergraduate graduates. (Statistical data released on February 1, 2023).

2) The population (experts) studied in the first phase. The population used in the first phase of the study is consistent with the second and fourth phase, including system evaluation experts,model evaluation experts, and employment ability guidance teaching experts.

The samples used in the phase I study

1)Samples (students) for the first phase of research. According to the Yamane principle, The study selected a sample size of 180 graduates from four majors in the Business Administration Teaching Department of the Chinese Vocational College of Yunnan University of Finance and Economics, with a credibility of 96%.who voluntarily participated in all studies.The participants are all from the same school, grade, and age group; Non university or college students are not included in the scope.

2)Samples (experts) for the first phase of the study. The samples used in the first phase of the study are not consistent with the second and fourth phase, including 5 model experts:1 System evaluation expert,3 model evaluation experts,1 employability guidance teaching expert, with no less than 5 years of teaching experience and academic achievements in related fields.

PhaselI (D1): Develop a learning model of role-play learning and workshop teaching,by using employability diagnostic system to enhance employability skills.

Phase II study population

The population (experts) studied in the second phase. The population used in the second phase of the study is consistent with the fourth phase, including system evaluation experts, model evaluation experts, and employment ability guidance teaching experts.

Sample of Phase II study

Samples (experts) for the second phase of the study. The samples used in the fourth phase of the study is consistent with the first and fourth phase, including 5 model experts: 1 System evaluation expert, 3 model evaluation experts, 1 employability guidance teaching expert, with no less than 5 years of teaching experience and academic achievements in related fields.

Phase III(R2): Study the effectiveness of using a learning model of role-play learning and workshop teaching, by using employability diagnostic system to enhance employability skills.

Phase III study population

The population (students) studied in the third phase. The Chinese Vocational College, a college affiliated with Yunnan University of Finance and Economics in southwestern China, by using employability diagnostic system technology to promote employability skills. The population is 625 undergraduate graduates. (Statistical data released on February 1, 2023).

The Phase III study sample

Sample (students) for the second phase of the study

1) Based on specific choices, 50 students will be selected as a try out group sample. The selection criteria for participants are based on the definition of the workshop. Through a workshop organization that provides employment counseling services to graduates, participants are recruited using the snowball method while maintaining an open attitude towards participants from other grades. The participants are all from the same school, grade, and age group; Non university or college students are not included in the scope.

2)Sample (students) for the third phase of the study.According to the specific method chosen, the study plans to select a sample size of 50 students from four majors in the Business Administration Teaching Department of Yunnan University of Finance and Economics,China Vocational College,as the experimental group.These students voluntarily participate in all studies.

PhaseIV(D2):Confirm the learning model form of role-play learning with workshop teaching,by using employability diagnostic system to enhance employability skills .

Phase IV study population

The population (experts) studied in the fourth phase.The population used in the fourth phase of the study is consistent with the first、 second and third phase, including system evaluation experts, model evaluation experts,and employment ability guidance teaching experts.

The samples used in the Phase IV study

Samples (experts) for the fourth phase of the study.The samples used in the fourth phase of the study is consistent with the first、 second and third phase, including 5 model experts:1 system evaluation expert,3 model evaluation experts,1 employability guidance teaching expert, with no less than 5 years of teaching experience and academic achievements in related fields.

Explain the details of the first phase

PhaseI(R1):Study the learning model conditions and requirements of role-play learning with workshop teaching,by using employability diagnostic system to enhance employability skills .

1.Research purpose of the first phase

Promote employability skills by use role-play learning with workshop teaching model based on Employability diagnostic system.Provide information on principles,elements,processes,methods,and organization of teaching activities to help promote,support,measure,and evaluate the development of research frameworks and data frameworks.

2. Population and Sample in the first phase

2.1 Phase I Study population

1) China Vocational College, a college affiliated to Yunnan University of Finance and Economics in southwest China, use by using employability diagnostic systems technology to promote employability skills: According to the Yamane principle, 180 undergraduate graduates were selected from 625 undergraduate graduates as the research population, with a credibility of 96%.

2) The experts used in the first phase are consistent with the second and fourth phase, including 1 system evaluation experts, 1 model evaluation experts, and 1 employment ability guidance teaching experts.

2.2 Samples used in Phase I study

Samples (students) for the first phase of the study.

The study aims to understand the employability of undergraduate seniors from the Business Administration Teaching Department of Zhonghua Vocational College, Yunnan University of Finance and Economics. According to the Yamane principle, 150 undergraduate seniors will be selected as a sample. The participants are all from the same school, grade, different major, and same age group; Non university or college students are not included in the scope. Researchers will contact the sample population through work learning group notifications, personal visits to classrooms and dormitories for publicity, and relying on course teaching methods.

Samples (experts) for the first phase of the study.

The experts used in the first phase are consistent with the second and fourth phase, and the 5 model experts were organized to attend an interview

According to the specific selection method, experts should consider the following criteria:

1) Experts with system evaluation qualifications must have at least 5 years of experience in system teaching or evaluation, or have achieved relevant academic achievements in the recognized field of system use in the education industry.

2) Experts with model evaluation qualifications must have experience in model teaching or evaluation (at least 5 years), or have achieved relevant academic achievements in the field of model development recognized by the education industry.

3) Experts with qualifications for career guidance teaching evaluation must have at least 5 years of experience in career guidance teaching or work, or have achieved relevant academic achievements in teaching design in the recognized field of career guidance in the education industry.

3. Research Instruments in the first phase

3.1 Instruments used in the first phase of the study are include:

- 1) Survey Questionnaire;
- 2) Semi structured interviews.

3.1 Survey Questionnaire; Through a survey questionnaire, understand the conditions and student needs for the development of the model. Based on the learning model conditions and needs of role-play learning with workshop teaching, by using employability diagnostic system to enhance employability skills. 180 undergraduate students from China Vocational College, the teaching department of Yunnan University of Finance and Economics in Southwestern China are encouraged to think.

3.2 Semi structured interviews. Through semi-structured interviews, understand the current development status of the model, student needs, and expert opinions, develop a learning model based on role-play learning and workshop teaching, by using employability diagnostic system to enhance employability skills.

1) The current situation, problems and direction of e-learning environment

2) In the e-learning society, the elements of role-play learning with workshop teaching by using the employability diagnostic system to promoting employability skills,

Three experts were organized to review the research tools of the first phase, including one content expert, one evaluation expert, and one technical expert. A total of three qualified experts participated in the study. Content experts are mainly responsible for checking whether the survey questionnaire and semi-structured interview content are consistent with the research questions; Evaluation experts are mainly responsible for checking whether survey questionnaires and semi-structured interviews are suitable for the use of research subjects; Technical experts are mainly responsible for checking whether the educational technology used in survey questionnaires and semi-structured interviews meets the research objectives.

3.2 Create and improve the instruments for the first phase

Phase I of the development of research instruments.

The first phase of developing research instruments includes two stages: Development conditions and requirements questionnaires, and development models;

Semi structured interview. Study the current situation, requirements, and experts' opinions, and present each stage in detail in a development mode.

3.2.1 Design a survey questionnaire to study the conditions and needs of role-play learning with workshop teaching model, by using employability diagnostic system to enhance employability skills.

1) Research, analyze and synthesize relevant literature and research results as a guide to determine structures and problems. It covers the conceptual framework and variables that need to be studied, including e-learning, employability diagnostic systems, role-play learning, employability diagnostic system, workshop teaching and employability skills.

2) Construction of self-assessment model through observation, researchers have synthesized a series of thinking from literature and research, including three parts:

Part 1: The general information of the respondents to the questionnaire is a detailed checklist. This information includes the gender,

age, grade, subject background, and background related to the research question of the research subject.

Part 2: Assessment the usability of student information technology. This includes knowledge level, general knowledge and skills in using information technology, as well as equipment for using multimedia, networks, and digital videos. Use metric questions for requirement assessment.

Evaluate based on the issue of dosage. Invite students to use a 5-level scale for the usability of student information technology assessment.

5 represents Strongly agree;

4 represents Agree;

3 represents Neither agree;

2 represents Disagree;

1 represents Strongly disagree .

The average standard for translation is as follows (Sirichai Kanchanawasi, 2009):

4.50-5.00 indicates highest ability;

3.50-4.49 indicates higher ability;

2.50-3.49 indicates moderate ability;

1.50-2.49 indicates lower ability;

1.00-1.49 indicates minimum ability.

Part 3 Assessment students' actual and expected abilities in using employability diagnostic systems to develop role-play learning with workshop teaching models, using employability diagnostic systems as the foundation for electronic learning to promote employability. Three evaluation stages, including the functionality, backend services, and effectiveness of the employability diagnosis system. Use metric questions for requirement assessment. Evaluate based on the issue of dosage.

Evaluate based on the issue of dosage. Invite students to use a 5-level scale for the ability of using employability diagnostic system assessment.

5 represents Strongly agree;

4 represents Agree;

3 represents Neither agree;

2 represents Disagree;

1 represents Strongly disagree .

The average standard for translation is as follows(Sirichai Kanchanawasi, 2009):

4.50-5.00 indicates highest ability;

3.50-4.49 indicates higher ability;

2.50-3.49 indicates moderate ability;

1.50-2.49 indicates lower ability;

1.00-1.49 indicates minimum ability.

Part 4: Assessment students' realistic and expected conditions for model development,develop a role-play learning with workshop teaching model,and use an employability diagnostic system as the foundation for electronic learning to promote employability skill.Including 5 evaluation stages, including student and teaching activity organization,e-learning environment,measurement and evaluation,and employment ability improvement effectiveness.Use metric questions for requirement assessment.

Evaluate based on the issue of dosage.Invite students to use a 5-level scale for needs assessment.

5 represents Strongly agree;

4 represents Agree;

3 represents Neither agree;

2 represents Disagree;

1 represents Strongly disagree .

The average standard for translation is as follows(Sirichai Kanchanawasi, 2009):

4.50-5.00 indicates highest ability;

3.50-4.49 indicates higher ability;

2.50-3.49 indicates moderate ability;

1.50-2.49 indicates lower ability;

1.00-1.49 indicates minimum ability.

3) Establish the questionnaire according to the structural indicators

4) Submit the questionnaire to the thesis advisor.

5) Update the questionnaire according to the comprehensive suggestions.

6) Send the questionnaire survey to 3 IOC experts.

Experts Using the IOC to evaluate the consistency between questionnaire and objectives:

- 1 represents that the problem invalid ;

0 represents that the problem no opinion ;

1 represents that the problem is valid.

7) Invite 3 experts to review the questionnaire survey, including 1 content expert, 1 evaluation expert, and 1 technical expert, to check the accuracy of self-evaluation. By calculating the consistency between the questionnaire and the measurement objectives through IOC evaluation, the result of IOC is 0.67-1.00 every items.

8) Revise the questionnaire according to the experts' suggestions, and evaluate the undergraduates who meet the sample.

9) The questionnaire is used for online collection and analysis of results, and is used for the development of the second phase teaching model.

3.2.2 Design a semi-structured interview form to study the current situation, needs, and expert opinions of role-play learning with workshop teaching model, by using employability diagnostic system to enhance employability skills .

1) Research, analyze and synthesize relevant documents and research results to guide the determination of the structure and problems of the interview mode related to role-play learning with workshop teaching.

2) Use employability diagnostic system as the basis of e-learning to promote employability skills. According to the questions raised in the document it consists of 2 parts.

Part 1: Information and expert status.

Part 2: Issues on development conditions and needs.

Question1:Managing the status, problems and trends of the use of learning support technologies

Question2:The employability diagnostic system with the workshop classroom management,including guidance on how to effectively organize the workshop classroom learning activities,strengthen the factors of the employability diagnostic system processing and workshop classroom management,prevent risk factors and solve problems.

Question3:The organization of role-play teaching activities, including how to effectively guide role-play learning with workshop teaching activities, to promote role -play learning with workshop teaching factors,prevent risk factors and how to solve problems.

Question4:Employability diagnostic system learning environment (e-learning environment),including factors that guide how to effectively organize the employability diagnostic system learning environment, promote learners to learn in the employability diagnostic system learning environment,prevention or risk factors, and how to solve problems.

Question5:Educational management of e-learning, including how to effectively manage education in an electronic society.

Question6:It includes instructing students how to effectively train their employability skills, encouraging them to actively think about and prevent risk factors, and how to solve problems.

Question 7: Feasibility of consulting experts to conduct a 6-week learning plan for experimental group students in the third phase.

3) Send the Semi-structure interview form to 3 IOC experts.

Experts Using the IOC to evaluate the consistency between questionnaire and objectives:

- 1 represents that the problem invalid ;
- 0 represents that the problem no opinion ;
- 1 represents that the problem is valid.

4) Invite 3 experts to review the Semi-structure interview form, including 1 content expert, 1 evaluation expert, and 1 technical expert, to check the accuracy of self-evaluation. By calculating the consistency between the Semi-structure interview form and the measurement objectives through IOC evaluation, the result of IOC is 0.67-1.00 every items.

4. Data collection in the first phase

Five experts were interviewed to collect data, including 5 model experts: 1 System evaluation expert, 3 model evaluation experts, 1 employability guidance teaching expert.

- 1) Bring a questionnaire to collect data with the students.
- 2) Bring the semi-structured interview form to collect data with the model experts.
- 3) Organize an interview with 5 model experts, and then write an interview summary based on the interview results.

5. Data analysis in the first phase

1) Analyze the research data with questionnaires. Statistical data are analyzed by Mean and standard deviation.

2) Analyze the data of the expert interview, and the researchers use the consistency of the content of the key questions collected, and compile a summary according to the interview questions.

Explain the details of the second phase

Phase II (D1): Develop a role-play learning with workshop teaching model, by using employability diagnostic system to enhance employability skills .

1. Research purpose of the second phase:

Develop a learning model based on role-play learning with workshop teaching by using employability diagnostic system to improve the employability of Chinese college students. Based on the research framework and data obtained in the first phase, design the style, elements, teaching process, teaching activities, and model evaluation methods of the model.

2. Sample and population in the second phase

2.1 Population of the second phase study

The population (experts) used in the second phase of the study is including 5 model experts: 1 System evaluation expert, 3 model evaluation experts, 1 employability guidance teaching expert, with no less than 5 years of teaching experience and academic achievements in related fields.

2.2 Samples of the second phase study

The experts used in the second phase are consistent with those in the first, third and fourth phase. 5 model experts were organized to interview the pattern prototype.

According to the specific selection method, experts should consider the following criteria:

1) Experts with system evaluation qualifications must have at least 5 years of experience in system teaching or evaluation, or have achieved relevant academic achievements in the recognized field of system use in the education industry.

2) Experts with model evaluation qualifications must have experience in model teaching or evaluation (at least 5 years), or have achieved relevant academic achievements in the field of model development recognized by the education industry.

3) Experts with qualifications for career guidance teaching evaluation must have at least 5 years of experience in career guidance teaching or work, or have achieved relevant academic achievements in teaching design in the recognized field of career guidance in the education industry.

3. Research Instruments in the second phase

3.1 Instruments used in the second phase of research

1)-Instrument 3 An evaluation on the style and structure of a draft with role-play-based learning and workshop teaching model

2)-Instrument 4 Lesson Plan

3.1 An evaluation on the style and structure of a draft with role-play learning and workshop teaching model, by using employability diagnostic system to enhance employability skills.

3.2 Write a lesson plan and organize learning activities using role-play learning and workshop teaching model to develop a learning model by using employability diagnostic system to enhance employability skills.

Three experts were organized to review the research instruments for the second phase, including a content expert, an evaluation expert, and a technical expert. A total of three qualified experts participated in the study. The content expert is mainly responsible for checking whether the draft of model, lesson plans are consistent with the research questions; The evaluation expert is mainly responsible for checking whether the model expert opinion interview, structural evaluation list, model draft content, and teaching plan are suitable for the use of the research object; Technical experts are mainly responsible for checking whether the interview with model experts, the list of structural evaluations, the content of the model draft, and the educational technology used in the lesson plan meet the research objectives.

3.2 Create and improve the instruments for the second phase

Phase II Development of research instruments

3.2.1 Employability diagnostic system. Based on the theory of the employability diagnostic model summarized in the previous literature review on the

"Eight Elements that Affect Employment Success in the Post pandemic Era", researchers have chosen an employability diagnostic system specifically designed for guiding students' employability. This system was developed and introduced by the employment guidance department of the school where researchers work, and is part of the teaching model. It is mainly used to serve the development of the entire teaching model and promote the improvement of students' employability skills.

3.2.2 An evaluation of the style and structure of a draft with role-play learning with workshop teaching model, by using employability diagnostic system as the basis for e-learning to promote employability skills

The preliminary framework as follows:

Model Name: Role-Play Learning with Workshop Teaching Model Based on employability diagnostic system

1) Research how to design a role-play learning combined with workshop teaching model for students based on employability diagnosis system technology development; Analyze learners, content, learning objectives, concepts, and strategies, including analyzing and selecting appropriate technologies to meet the learning needs of learners and teachers.

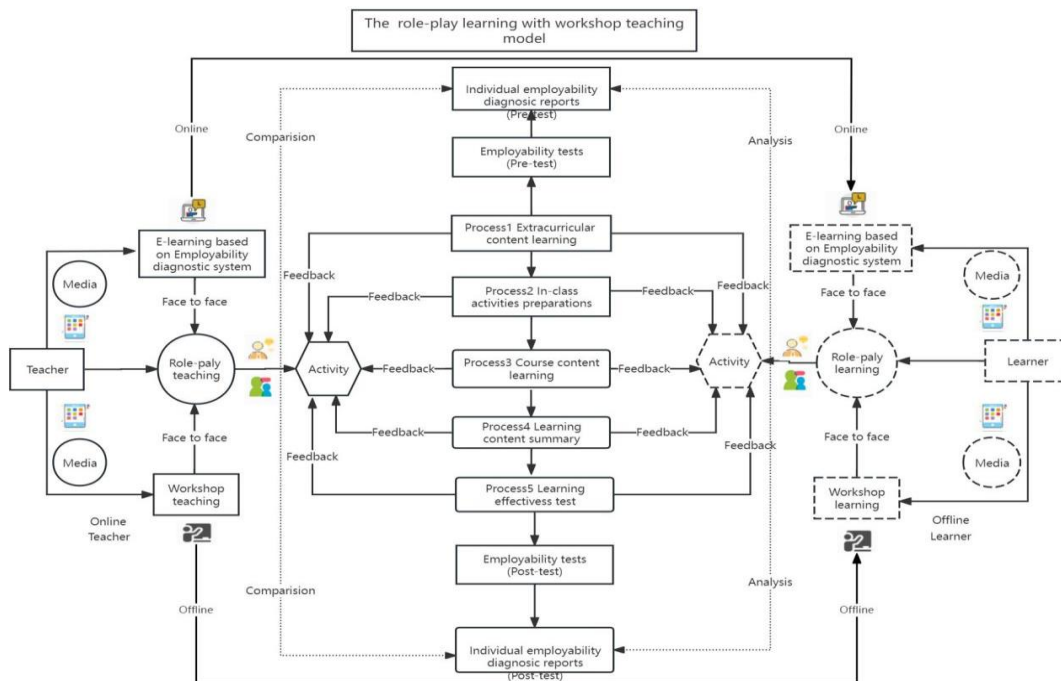
2) Determine the draft teaching model for role-play learning combined with the workshop (preliminary framework)

Model Name: Role-play Learning with Workshop Teaching Model

Table 6 The preliminary framework of draft model

Input		Process		Output
Teacher	Employability diagnostic system(Theoretical knowledge teaching)	Process 1: Learn extracurricular content.	Employability diagnostic system (Theoretical knowledge learning)	Student
	Employability	Process2: Prepare	Employability	

Input	Process	Output
diagnostic system(Setting Questions)	for classroom activities.	diagnostic system(Answer Questions)
Role-play learning with Workshop teaching (organizing practical activities)	Process 3: Course learning schedule content	Role-play learning with Workshop teaching(participating in practical activities)
Feedback (Summary, task arrangement)	Process 4: Summary of Learning Content	Feedback (reporting, completing tasks)
Evaluation (Organizational Testing)	Process 5: Learning Effectiveness Test	Evaluation (participation in testing)Employability diagnostic system



Figures 23 The draft of role-play learning with workshop teaching model

3) Send the draft of role-play learning with workshop teaching model to the advisor for review, revision, and update.

4) Send the draft of role-play learning with workshop teaching model to 3 IOC experts.

Experts Using the IOC to evaluate the consistency between draft of model and objectives:

- 1 represents that the problem invalid ;

0 represents that the problem no opinion ;

1 represents that the problem is valid.

5) Invite 3 IOC experts to review the draft of model, including 1 content expert, 1 evaluation expert, and 1 technical expert, to check the accuracy of self-evaluation. By calculating the consistency between the draft of role-play learning with workshop teaching model and the measurement objectives through IOC evaluation, the result of IOC is 0.67-1.00 every items.

6) Invite 5 model experts to conduct learning model style and structure evaluation. Provide learning model and evaluation reports to 5 model experts to evaluate the quality and content of the learning models. The evaluation report should be submitted to the thesis advisor for review, and modifications should be made based on suggestions before submitting it for expert evaluation.

Step 1: Based on research analysis and synthesis of relevant literature and research results, guide the structure and issues of the model draft evaluation report.

Step 2: Develop a structural evaluation list in the literature by combining role-play learning with workshop teaching model. The model draft evaluation report includes 8 questions:

Question 1: The roles

Question 2: Learning activities

Question 3: Learning Environment

Question 4: Learners

Question 5: Teaching process

Question 6: Support Tools

Question 7: Feedback

Question 8: Evaluation

This evaluation model uses an 5- level valuation scale to measure the appropriate of draft model.

5 represents very appropriate.

4 represents appropriate.

3 represents Neither appropriate.

2 represents inappropriate.

1 represents very inappropriate.

The average standard for translation is as follows(Sirichai Kanchanawasi, 2009):

4.50-5.00 indicates highest appropriate.

3.50-4.49 indicates higher appropriate.

2.50-3.49 indicates moderate appropriate.

1.50-2.49 indicates low appropriate.

1.00-1.49 represents the minimum appropriate.

6) Improve the learning model. Among senior students from the same college, 50 control group students were tested. At the same time, the test results are synthesized, analyzed, summarized, and improved to make the model more complete for use in research samples.

The expert's revision comments are as follows:

a) Experts suggest adding color differentiation modules to the model sketch to make the model clearer;

b) Experts suggest distinguishing between dashed and solid lines in the model draft route, and marking different colors to distinguish between online and offline learning;

c) Experts suggest adding a schematic diagram to explain the draft model.

3.2.3 Develop a lesson plan, use role-play learning with workshop teaching model to organize learning activities, and develop a learning model that combines role-play learning with workshop teaching. Use an employability diagnostic system as the foundation for e-learning to enhance employability skill.

1) Compile a role-play learning with workshop teaching model lesson plan based on employability diagnostic system learning based on the development conditions and requirements obtained from the first phase of research, and submit it to the advisor to ensure its effectiveness.

2) Improve the lesson plan through group discussions. Invite 5 model experts to determine the lesson plan through group discussions, and then make modifications and improvements based on suggestions.

The framework and plan structure for arranging learning activities in detail are as follows

There are a total of 5 parts of learning content, including:

Part 1: Analysis of the Recruitment Model of Employers

Part 2: Job Objective Decision

Part 3: Job Analysis of Job Search Objectives

Part 4: Self marketing - resume coaching

Part 5: Self marketing - Interview coaching

Table 7 Presents the lesson plan structure of role-play learning with workshop teaching model based on the employability diagnosis system.

Employability diagnostic system (knowledge level goal)	Role-play learning with Workshop teaching (Competence level goal)	Employability skills (Skill level goals)
1. Analysis on the Recruitment Mode of Employers Five magic weapons for talent recruiters: 1) Collection and analysis of information 2) Interview Scoring Form 3) Interview question book (there may be many sets) 4) Competency (model) analysis 5) Reference description of behavior score	1) Explore the organizational human resource framework and understand the essence of recruitment 2) Statement of Work 3) Understanding the Basis of Choosing and Retaining: Building a Competency Model 4) Personal competency inventory and improvement plan	The ability to apply for a job

Employability diagnostic system (knowledge level goal)	Role-play learning with Workshop teaching (Competence level goal)	Employability skills (Skill level goals)
2. Decision making of job objective	1) Decision status diagnosis 2) Career decision-making and career identity, and clear personal career goals (job seeking intention) 3) Personal Capital Mining - Interview with Life Events	1) The ability to apply for a job 2) The professional and technical ability 3) The ability to regulate emotions
1) Personal employability status diagnosis/decision-making status diagnosis		
2) Career Opportunity Incubator		
3) The "quick question and quick answer" and "construction method" of career choice value exploration"		
4) Value Cost Analysis		
5) Clear decision-making strategies - career decision-making balance sheet/SWOT analysis, etc		

Employability diagnostic system (knowledge level goal)	Role-play learning with Workshop teaching (Competence level goal)	Employability skills (Skill level goals)
<p>3. Job analysis of job objectives</p> <p>1) The official name of the target position Statement of work for the target position</p> <p>2) Work content of the target position</p> <p>3) Statement of Work and Key Words</p> <p>4) Work content and employment standards</p> <p>5) Work analysis and frontier tracking</p> <p>6) Job Analysis - Employers Professional information da</p>	<p>Explore the job description and understand the nature of the job</p>	<p>1) The ability to apply for a job</p> <p>2) The second is professional and technical ability</p> <p>3) Self-development ability emotions</p>
<p>4. Self marketing - resume coaching</p> <p>1) Screening elements of resume (1) - professionalism</p> <p>2) Key elements of resume screening (2) - keywords</p> <p>3) Screening elements of resume (3) - evidence</p> <p>4) Screening elements of resume (4) - others</p> <p>5) Screening position of resume</p>	<p>Write and optimize targeted resumes based on job description and personal capital</p>	<p>1) The ability to apply for a job</p> <p>2) The professional and technical ability</p>

Employability diagnostic system (knowledge level goal)	Role-play learning with Workshop teaching (Competence level goal)	Employability skills (Skill level goals)
5. Self marketing - interview coaching 1) Teach you to predict interview questions 2) Achievement event interview method - provide targeted evidence for the interview 3) Interview Answer Competition -- Application of STAR Principle and Pyramid Principle 4) Stress interview experience 5) Classification of interview questions 6) Develop the scope of assessment questions according to the job description 7) 6W method	Anticipate interview questions and make full preparations for the interview Interview response	1) The ability to apply for a job 2) The professional and technical ability 3) The interpersonal communication ability 4) Self-development ability 5) The ability to regulate emotions

3) Arrange 6 weeks of learning activities according to the structure and plan to ensure the effectiveness of the learning activities.

4) Improve the lesson plan based on the advisor's suggestions

5) Send the lesson plan to 3 IOC experts .

Experts Using the IOC to evaluate the consistency between lesson and objectives:

- 1 represents that the problem invalid ;

0 represents that the problem no opinion ;

1 represents that the problem is valid.

6) Invite 3 IOC experts to review the lesson plan, including 1 content expert, 1 evaluation expert, and 1 technical expert, to check the accuracy of self-evaluation. By calculating the consistency between the lesson plan and the measurement objectives through IOC evaluation, the result of IOC is 0.67-1.00 every items.

7) Organize 5 model experts to evaluate the quality of lesson plan.

For five experts using the following criteria:

5 represents Very pool;

4 represents Pool;

3 represents Acceptable;

2 represents Good;

1 represents Very good.

The average standard for translation is as follows (Sirichai Kanchanawasi, 2009):

4.50-5.00 indicates highest quality.

3.50-4.49 indicates higher quality.

2.50-3.49 indicates moderate quality.

1.50-2.49 indicates low quality.

1.00-1.49 represents the minimum quality.

8) Revise the lesson plan based on expert suggestions as a guideline for subsequent experimental activities.

4.Data collection in the second phase

Based on the evaluation model of role-play learning with workshop teaching,by using employability diagnostic system to enhance employability skills,the method of collecting data in the second phase is as follows:

1)The researcher bring the An evaluation on the style and structure of a draft with role-play learning and workshop teaching model to 5 model experts.revised and modify the model draft following the expert's suggestion.

2)The researcher bring the lessson plan to 5 model experts,revised and modify it for completion lesson plan.

5.Data analysis in the second phase

1) Based on data analysis of model draft evaluation, conduct data analysis on the evaluation of model draft by 5 model experts,calculate the average and standard deviation, and translate based on the average value.On this basis,some improvement suggestions were proposed to make the model more comprehensive.

2) Conduct data analysis on the evaluation of the lesson plan by 5 model experts. By considering the consistency of the content, the main issues collected are compared with concepts, theories, and models, and adjustments are made.

Explain the details of the third phase

PhaseIII(R2):Study the effectiveness of role-play learning with workshop teaching model by using employability diagnostic system to enhance employability skills.

1.Research purpose of the third phase:

In order to improve and verify the quality of these tools, the researchers conducted an experiment and studied the results.In order to study and compare the results of the employability improvement effect test form before and after the experiment,the evaluation of the employability improvement model based on role

play and workshop teaching was also studied. Use employability diagnostic system as the basis of e-learning to promote employability skills.

2. Population and Sample in the third phase

2.1 Population of the third phase study

The population (students) studied in the third phase. The Chinese Vocational College, a college affiliated with Yunnan University of Finance and Economics in southwestern China, use employability diagnostic system technology to promote employability skills. The population is 625 undergraduate graduates. (Statistical data released on February 1, 2023).

2.2 Samples of the third phase study

Sample of students (try out group students). According to the specific method chosen, the study plans to select a sample size of 50 students from four majors in the Business Administration Teaching Department of Yunnan University of Finance and Economics, China Vocational College, as a try out group sample size. These students voluntarily participate in all studies.

According to the specific selection method, students should consider the following criteria:

1) The selection criteria for participants are based on the definition of the workshop.

2) Through a workshop organization that provides employment counseling services to graduates, participants are recruited using the snowball method while maintaining an open attitude towards participants from other grades.

3) The participants are all from the same school, grade, and age group; Non university or college students are not included in the scope.

2.2.2 Sample of students (experimental group) According to the specific method chosen, the study plans to select a sample size of 50 students from four majors in the Business Administration Teaching Department of Yunnan University of Finance and Economics, China Vocational College, as the experimental group. These

students voluntarily participate in all studies. The student enrolled in 2020 and is currently in the second semester of the third academic year.

According to the specific selection method, students should consider the following criteria:

1) The researchers selected 50 undergraduates who met these characteristics.

The average age of the participants is 20-23 years old, the academic background is e-commerce, and the academic performance is medium.

2) Students have no previous learning experience in the workshop mode, and the learning time in the employability diagnostic system every week is not less than 10 hours.

3) They have no previous knowledge or training related to the simulated interview. The way of job interview practice is mainly through classroom learning, off-campus practice, participation in campus job fairs and others.

4) Motivation for participation: a) Curiosity; b) Learning: the pursuit of knowledge progress; c) There are insufficient interview skills in the employment process; d) Demand for employment: obtain employment skills upgrading tools; e) Self-improvement awareness: personal development.

5) Expectations: a) Learning: knowledge progress; b) Access to employability enhancement tools; c) The ability to gain a good way of self-expression; d) Continuous development of personal and professional life; e) Accumulate useful experience in job interview and increase the probability of successful application; f) The acquisition and consolidation of employability enhancement knowledge.

3. Research Instruments in the third phase

3.1 Instruments used in the third phase research

- 1) Instruments 5 Employability test (pre-test and post-test)
- 2) Instruments 6 Student satisfaction survey form

3.1.1 Employability test (Pre-test and Post-test).to study the effectiveness of using a learning model of role-play learning with workshop teaching,by using employability diagnostic system to enhance employability skills.

3.1.2 Design a student satisfaction survey questionnaire.to study the student's satisfaction of using a learning model of role-play learning and workshop teaching,by using employability diagnostic system to enhance employability skills.

Three experts were organized to review the research instruments of the third phase, including a content expert, an evaluation expert, and a technical expert.A total of three qualified experts participated in the study.The content expert is mainly responsible for checking the employment achievement test (Pre-test and Post-test), and the content of the student satisfaction survey model is consistent with the research questions;The evaluation experts are mainly responsible for checking whether the employment achievement test (Pre-test and Post-test) and student satisfaction survey mode are suitable for the use of the research object;The technical experts are mainly responsible for checking whether the educational technology used in the employment achievement test (Pre-test and Post-test)and the student satisfaction survey model meet the research objectives.

3.2 Create and improve the instruments for the third phase

Phase III Development of research instruments

3.2.1 **Employability test form** .According to the teaching schedule of the second phase,set up a series of employability test forms on role-play learning with workshop teaching model by using employability diagnostic system to enhance employability skills.Through employability diagnostic system to organize test,and personal diagnostic reports before and after test for students' employability skills.

1)To study how to design an employability test form based on employability diagnostic systems technology to development the role-play learning with workshop teaching model for students, analyze the evaluation content, evaluation structure, evaluation form, evaluation ability, etc, so as to meet the learning and use of learners and teachers.

2) Determine the evaluation criteria of employability test.

Based on the diagnostic model theory of employability derived from previous literature review, research is conducted around 8 factors that affect employment success. Specifically, the evaluation criteria for employability are as follows:

Table 8 The evaluation criteria of employability test.

Evaluation dimension	Dimensional Interpretation
Employment willingness	Measure employment intention and attitude towards job search, whether you will find employment or pursue higher education after graduation, whether job hunting is important to you, and whether you are willing to take the initiative to find a job. (Including qualitative descriptive indicators such as employment motivation and emotions)
Goal identification	Measure whether one has clear and stable career goals, which are made based on self understanding and career understanding, and are acceptable/recognized by oneself and will not be easily changed.
Job Analysis	Assess students' understanding of the professional world based on their personal job search goals. Job analysis is the foundation for standing out in the job search process.
Human Capital Confidence	Based on one's current learning and practical experience, determine whether one has sufficient competitiveness in the job market and future workplace.
Opportunity mining	This includes knowing how to explore employment opportunities, actively utilizing various channels and resources to obtain desired employment information, and organizing and evaluating the obtained information.
Job performance	Measure self marketing ability, that is, whether one can effectively express oneself in resumes and interviews, thereby successfully obtaining the expected position.
Monitoring and regulation	Can you develop a job search plan, track and evaluate your job search progress, effectiveness of job search activities, emotional state, etc., reflect and summarize your experience, and adjust strategies to obtain the expected position.
Job search efficacy	Confidence in one's ability to find the job one desires, that is, whether one believes that one can perform well in a series of job search processes such as resumes and interviews, and have the ability to solve difficulties encountered during the job search process.

3) Send the evaluation criteria of employability test form to 3 IOC experts.

Experts Using the IOC to evaluate the consistency between the evaluation criteria and objectives:

- 1 represents that the problem invalid ;

0 represents that the problem no opinion ;

1 represents that the problem is valid.

4) Invite 3 IOC experts to review the evaluation criteria of employability test form, including 1 content expert, 1 evaluation expert, and 1 technical expert, to check the accuracy of self-evaluation. By calculating the consistency between the employability test criteria and the measurement objectives through IOC evaluation, the result of IOC is 0.67-1.00 every items.

5) After obtaining the permission of three IOC experts, 50 experimental group students were invited to use the employability test criteria.

6) Prepare the employability test form and submit it to the advisor to ensure its effectiveness.

Step	Details
1. Study the measurement design method	The Method of designing the employability test form for College Senior Students
2. Define structure and content metrics.	<p>Design measurement content based on 5 parts of learning content and 8 evaluation dimensions</p> <p>Learning content:</p> <ol style="list-style-type: none"> 1) Analysis of the recruitment model of employers 2) Job target decision-making; 3) Job analysis of job objectives; 4) Self marketing - resume coaching; 5) Self marketing - Interview coaching <p>Evaluation dimension:</p> <ol style="list-style-type: none"> 1) Employment willingness 2) Goal identification 3) Job analysis 4) Human Capital Confidence 5) Opportunity mining 6) Job performance 7) Monitoring and regulation
3. Draft scale	<p>According to the number of learning contents, a set of Employability improvement test form for five learning parts was developed.</p> <p>Related test table:</p> <p>Test1: Specific Conditions of Students' Motivation for Active and Passive Employment (Single Multiple choice)</p> <p>Test 2: Student goal status and decision information testing (Single Multiple choice)</p> <p>Test 3: Student Work Analysis Specific Situation Test (Single Multiple choice)</p> <p>Test 4: Student Performance in Capital Confidence (Single Multiple choice)</p> <p>Test 5: Testing of Students in Collecting Employment Information and</p>

Step	Details
	<p>Mining Opportunities (Single Multiple choice)</p> <p>Test 6.1:Resume self-assessment ability evaluation(Single Multiple choice)</p> <p>Test 6.2 Self evaluation of interview ability(Single Multiple choice)</p> <p>Test 7: Analysis of the Specific Situation of Student Monitoring and Regulation (Single Multiple choice)</p> <p>Test 8: Specific analysis of students' job search validity (Single Multiple choice)</p>
4. Consistency index of content evaluation (measurement part)	Submit the content evaluation report (measurement part) to the measurement tool experts to obtain the consistency index of the content evaluation report (measurement part). In all problems,the IOC values range from 0.67 to 1.00.
5. Scale evaluation	The knowledge measurement model in Article 3 and the content evaluation model (measurement model part) in Article 4 provide appropriate and accurate evaluation to experts.
6. Test Cases	Among the seniors from the same college,50 students conducted measurement and media experiments, and the results showed employability improvement.
7. Effectiveness of the scale	In 8 tests, 50 subjects were arranged together to form a method to measure the effect of improving employability skill.

7) Sending the employability test form to 3 IOC experts.

Experts Using the IOC to evaluate the consistency between questionnaire and objectives:

- 1 represents that the problem invalid ;

0 represents that the problem no opinion ;

1 represents that the problem is valid.

8) Invite 3 IOC experts to review the employability test form, including 1 content expert, 1 evaluation expert, and 1 technical expert,to check the

accuracy of self-evaluation. By calculating the consistency between the employability test form and the measurement objectives through IOC evaluation, the result of IOC is 0.67-1.00 every items.

9) Modify and revised it after the IOC experts suggestion.

10) Organize 50 students (try out group) to evaluate the quality of employability test.

11) Improve the achievement test for employment. Among senior students from the same college, 50 students from the experimental group were tested. And synthesize, analyze, summarize, and improve the test results to make the test form more complete for use in research samples.

For students use the following meaning:

5 represents Strongly agree;

4 represents Agree;

3 represents Neither agree;

2 represents Disagree;

1 represents Strongly disagree .

The average standard for translation is as follows:

Items on employability skills were adopted from Segbenya et al. (2022).

The average standard for translation is as follows (Sirichai Kanchanawasi, 2009)

4.50-5.00 represents the highest agree;

3.50-4.49 indicates the higher agree;

2.50-3.49 indicates moderate higher agree;

1.50-2.49 indicates low higher agree;

1.00-1.49 indicates the minimum degree.

3.2.2 Conduct a student satisfaction survey on role-play learning with workshop teaching models, by using employability diagnostic systems to enhance employability skills.

The satisfaction assessment is divided into three parts: the first part is the basic information of the survey respondents, the second part is the evaluation

of learning, including five standardized questions and one open question, and the third part is suggestions for improving the mode of learning.

Part1:General information of survey respondents, including background information related to gender, age, major, and research content. Use IOC to check the consistency between the questionnaire and the research objectives.

Part2:Regarding the learning feedback and satisfaction survey of role-play learning combined with workshop teaching model, using the employability diagnosis system as the foundation of electronic learning, encouraging employability improvement, and evaluating standard issues.

1) Design the satisfaction survey of role-play learning combined with workshop teaching model.

Step	Details
1. Research methods for creating questionnaires	Learn how to design questionnaires for learners.
2. Determine the structure and content of the questionnaire	1) General information of individual students 2) Comments on learning model 3) How Teachers Provide Learning Models
3. Drafting a survey questionnaire	A questionnaire used after completing the learning task based on the 5 parts of the learning content.
4. Find the consistency index of the questionnaire	Submit the questionnaire to a measurement tool expert to determine the consistency index of the questionnaire

2) Sending the employability test form to 3 IOC experts.

Experts Using the IOC to evaluate the consistency between questionnaire and objectives:

- 1 represents that the problem invalid ;

0 represents that the problem no opinion ;

1 represents that the problem is valid.

3) Invite 3 IOC experts to review the satisfaction survey of role-play learning combined with workshop teaching model, including 1 content expert, 1 evaluation expert, and 1 technical expert, to check the accuracy of self-evaluation. By calculating the consistency between the satisfaction survey and the measurement objectives through IOC evaluation, the result of IOC is 0.67-1.00 every items.

4) Modify and revised it after the IOC experts suggestion.

5) Organize 50 students (Experimental group) to evaluate the satisfaction survey of role-play-based learning combined with workshop teaching model. These standard question evaluations use an evaluation scale to measure satisfaction at prototype level 5, and according to the Likert scale, each level is meaningful.

5 represents Very satisfied

4 represents Satisfied

3 represents Neither satisfied

2 represents Dissatisfied

1 represents Very dissatisfied

The average standard for translation is as follows (Sirichai Kanchanawasi, 2009):

4.50-5.00 indicates highest satisfied

3.50-4.49 indicates high satisfied

2.50-3.49 indicates moderate satisfied

1.50-2.49 indicates lower satisfied

1.00-1.49 represents the lowest level of satisfied.

Part 3: Propose learning suggestions to improve the combination of role-play learning with workshop teaching model, using employability diagnostic systems as the foundation of e-learning, and promoting employability skills. Ask respondents to fill out a comment and provide feedback that best fits their reality.

Step	Details
1. Research, analysis and synthesis related concepts, theories and research	
2. Determine the problem and establish an evaluation model, so that the tutor can check the effectiveness of the paper	<p>Composed of 3 parts: Part 1: General information of survey respondents; Part 2: Learning feedback and satisfaction survey based on role-play learning and workshop teaching models, using an employability diagnostic system as the foundation for electronic learning, promoting employability, and evaluating standard issues, including: 1) learner aspect 2) learning environment aspect 4) learning environment aspect 5) evaluation aspect 5) learning satisfaction aspect; Part 3: Propose learning suggestions for improving and improving role-playing learning and workshop teaching models, using an employability diagnostic system as the foundation for electronic learning to promote employability. At the same time, ask respondents to fill in information, provide comments, and provide factual feedback.</p>
3. Evaluate according to the suggestions of the thesis tutor	
4. Submit the evaluation report to the IOC experts to evaluate the quality of the three questionnaires to determine the accuracy of the evaluation	<p>By calculating the consistency between the questionnaire and the measurement objectives, we found that the consistency index between the questionnaire and the objectives is between 3.90-4.50, which is acceptable. It can be used to collect sample data.</p>
5. Evaluation and modification	

4.Data collection in the third phase

1) The researchers organized 50 students in the control group to evaluate the quality of the Achievement test for employment, and obtained questions about the quality improvement of the Achievement test for employment from 50 students in the try out group.

2)The researchers improved the employment Achievement test,organized 50 students in the experimental group to conduct a six week employment Achievement test, and obtained test data from 50 students in the experimental group.

3) Researchers carried a student satisfaction survey questionnaire and organized an evaluation of 50 experimental group students to understand their satisfaction with the learning model. They obtained comments and suggestions on the learning model from 50 experimental group students.

Process of the third phase study

In the process of implementing role-play learning combined with workshop teaching model, the employment ability diagnosis system is used as the foundation of e-learning to promote the improvement of employment ability.This is an experimental study based on pre-class employment ability testing;A learning model of role-play-based learning with workshop teaching, using an employability diagnostic system in an e-learning environment to promote employability skills; A post class test based on employability skills.

O1	X	O2
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O1 A pre-course employability based test

X A learning approach based on role-play learning with workshop teaching models, utilizing an employability diagnostic system in an e-learning environment to promote employability;

O2 An after-school employability based test.

The research object is divided into three stages:

Stage 1: Preparation before class

Stage 2: After class learning stage

Stage 3: Model Learning Assessment

Each stage of the research process is described in detail:

Stage I: Preparation for mode based learning

1. Determine and verify the test samples with the following characteristics:

1) Undergraduate of China Vocational College, a college affiliated to Yunnan University of Finance and Economics in Southwest China.

2) Colleges and universities used for experiments must be ready to hold workshops and teaching activities.

3) Colleges and universities used for experiments must have the technical infrastructure of hardware, software and stable network.

4) Students of online instructional design related courses

2. Clarify learners' understanding, and guide learners of different majors to clarify the experimental learning steps and methods of using learning model before conducting experiments, as well as their communication channels during the activity.

3. Evaluate students' behavior and ability to use information technology. In order to learn about the use behavior and availability of information technology, as well as the availability of learning support tools, learners can evaluate which parts they should demonstrate or recommend to learners.

4. Let students measure their employability before learning.

Stage 2: After class learning stage

1. Group learning activities according to students' preferences, and then use a random program to group students into groups of 4-5 people per group.

2. Instructors entrust students to study the contents outside the classroom and reflect the knowledge of the research contents in all learning units.

3. Before starting classroom activities, the teaching staff should review or test each time.

4. In a given workshop teaching activity, students must first complete individual and group tasks. Then, in a hypothetical scenario, start group activities and have the students study, research, and brainstorm together. Find a solution based on the given situation, and learners can view the activity results.

5. Teaching staff collect data during the experimental process by evaluating the tasks of a given activity. In lessons 1 and 22, the role-play learning with workshop teaching models were used to evaluate learning progress.

Stage 3: Model Learning Assessment

1. Students use 8 employment Achievement test forms for evaluation. After completing the 5-week experimental plan, evaluate the evaluation effect in the sixth week.

2. Evaluate student satisfaction with role-play learning with workshop teaching model based on the development of employability diagnostic system, and use employability diagnostic system as the basis for e-learning to promote employability skills.

5. Analysis of research data in the third phase

1) Collect experimental data, use descriptive statistics to analyze data, and use frequency, percentage and standard deviation.

2) Analyze the data, and use t-test dependent statistical data to compare the average scores of the employability evaluation scale, and correlation method.

3) Analyze the data and use t-test one group dependent statistics to compare the average scores of employability assessment in the e-learning environment.

4) Use the mean and standard deviation to analyze students' satisfaction and evaluation of the curriculum.

5) Use the correlation method to analyze students' employability skills. Spamas Aungsuchot (N.D) and Best, John W. (1977)

Explain the details of the fourth phase

Phase IV(D2): Confirm the learning model form of role-play learning with workshop teaching by using employability diagnostic system to enhance employability skills.

1. Research purpose of the fourth phase:

The purpose of this phase of research is to explore the form comments of experts on the combination of role-play learning with workshop teaching model, using the employability diagnostic system as the basis for e-learning to promote employability skills.

2. Population and Sample in the fourth phase

2.1 Population used in Phase IV study

The population used in the fourth phase of the study is consistent with the first, third and second phases, including workshop teaching experts and employability diagnostic system use experts, employment guidance experts, and management education experts in e-learning.

2.2 Samples used in Phase IV study

The samples used in the fourth phase of the study is consistent with the second phase, including 5 qualified model experts: 1 System evaluation expert, 3 model evaluation experts, 1 employability guidance teaching expert, with no less than 5 years of teaching experience and academic achievements in related fields.

According to the specific selection method, expert should consider the following criteria:

1) Experts with system evaluation qualifications must have at least 5 years of experience in system teaching or evaluation, or have achieved relevant academic achievements in the recognized field of system use in the education industry.

2) Experts with model evaluation qualifications must have experience in model teaching or evaluation (at least 5 years), or have achieved relevant

academic achievements in the field of model development recognized by the education industry.

3) Experts with qualifications for career guidance teaching evaluation must have at least 5 years of experience in career guidance teaching or work, or have achieved relevant academic achievements in teaching design in the recognized field of career guidance in the education industry.

3. Research Instruments in fourth phase

3.1 Instruments used in the fourth phase research

The form confirm evaluation of role-play-based learning with workshop teaching model by using employability diagnostic system to enhance employability skills .

3.2 Create and improve the instruments for the fourth phase

Phase IV Development of research instruments

1) Research, analysis and synthesis related concepts, theories and research

2) Identify problems in the evaluation of role-play learning with workshop teaching, by using employability diagnostic system to enhance employability skills.

The evaluation on confirm the form of role-play learning with workshop teaching model includes 4 questions:

Part 1: Components of the Model

Part 2: Teaching Process of the Model

Part 3: Media and Technology of the Model

Part 4: Model Overview

3) Send the evaluation on confirm the form of role-play learning with workshop teaching model to 3 IOC experts.

Experts Using the IOC to evaluate the consistency between questionnaire and objectives:

- 1 represents that the problem invalid ;

0 represents that the problem no opinion ;

1 represents that the problem is valid.

4) Invite 3 IOC experts to review the model form confirm evaluation, including 1 content expert, 1 evaluation expert, and 1 technical expert, to check the accuracy of self-evaluation. By calculating the consistency between the model form confirm evaluation and the measurement objectives through IOC evaluation. The result of IOC is 0.67-1.00 every items.

5) Invite 5 model experts to evaluate the model form.

This evaluation model uses an evaluation scale to measure the appropriate of the prototype at level 5. According to the Likkert scale, each level is meaningful.

5 represents very appropriate.

4 represents appropriate.

3 represents Neither appropriate.

2 represents inappropriate.

1 represents very inappropriate.

The average standard for translation is as follows (Sirichai Kanchanawasi, 2009):

4.50-5.00 indicates highest appropriate.

3.50-4.49 indicates higher appropriate.

2.50-3.49 indicates moderate appropriate.

1.50-2.49 indicates low appropriate.

1.00-1.49 represents the minimum appropriate.

4. Data collection in the fourth phase

Using the Employability diagnostic system as the foundation for e-learning, evaluate the combination of role-play learning with workshop teaching model to promote employability enhancement. The data collection method for the fourth phase is as follows:

1) Please ask the paper advisor and 5 model experts to evaluate the form of the model, and then refine it according to the suggestions to form an evaluation report, which will be used to collect data from 5 qualified model experts.

2) Researchers propose the form of role-play learning and with workshop teaching model by using employability diagnostic system to enhance employability skills. Five model experts are organized to evaluate the model form to determine whether the components, processes, technologies, and media used in the model are appropriate, and whether they can support the improvement of students' employability. Data on the recognition of the model form is collected from five model experts.

5. Phase IV data analysis

The fourth phase of research data analysis.

1) In an e-learning environment, improve the experimental data of the third phase by evaluating role-play learning with workshop teaching model to enhance employability skills. Analyze data using mean and standard deviation.

2) In the e-learning environment, a role-play learning with workshop teaching model by using employability diagnostic system was adopted, and five experts commented on the form of the model.

3) Collect data from the form confirm evaluation of role-play learning with workshop teaching model and analyze the data using mean and standard deviation.

4) Improve the teaching model of role-play learning combined with workshops to enhance students' employability in the e-learning environment of the post pandemic era.

5) Evaluation summary and model certification.

CHAPTER 4

FINDINGS

The development of a role-play learning with workshop teaching model by using Employability diagnostic system to enhance Employability skills for undergraduate students in China. There are four objectives of the study : 1) To study the conditions and requirements of role-play learning with workshop teaching model, by using employability diagnostic system to enhance employability skills .2) To develop a learning model of role-play learning with workshop teaching, by using employability diagnostic system to enhance employability skills .3) To study the effectiveness of using a learning model of role-play learning with workshop teaching, by using employability diagnostic system to enhance employability skills .4) To confirm the learning model form of role-play learning with workshop teaching, by using employability diagnostic system to enhance employability skills .

The researchers divided the study into four phases.

Phase I: Study the learning model conditions and requirements of role-play learning with workshop teaching, by using employability diagnostic system to enhance employability skills .

Phase II: Develop a role-play learning with workshop teaching model, by using employability diagnostic system to enhance employability skills .

Phase III: Study the effectiveness of role-play learning with workshop teaching model, by using employability diagnostic system to enhance employability skills.

Phase IV: Confirm the form of role-play learning with workshop teaching model, by using employability diagnostic system to enhance employability skills .

The research findings are as follows.

Phase1(R1):Study the learning model conditions and requirements of role-play learning with workshop teaching,by using employability diagnostic system to enhance employability skills .

The research results of the survey questionnaire, It divided into four parts.

IOC experts results of the survey questionnaire is 0.67-1.00.And then The researchers conducted a questionnaire survey on the undergraduate graduates of the Business Administration Teaching Department of China Vocational College, Yunnan University of Finance and Economics, a university in Southwestern China, and defined the sample size as Krejcie and morganan at 95% confidence level, and defined the sample size as 5% of the acceptable error, that is,180 people.In this survey, researchers collected 180 samples and selected them. By conducting a simple sampling of the responses of 180 participants and conducting targeted testing using the Cranbach's Alpha method, the accuracy rate of 100 questionnaires was 0.994.



Figures 24 The image was sourced from the reliability analysis results of the online spark survey platform on the questionnaire star survey platform

Part 1: Survey results on general information of survey respondents. This mainly includes information on the gender, age, professional background, academic performance, grade, region, previous job interview learning experience, role-play, and workshop learning experience of the survey subjects.

Part 2: Survey results on evaluating the availability of electronic information technology among students. This includes knowledge level, general knowledge and skills in using information technology, as well as equipment for using multimedia, networks, and digital videos.

Part 3: Survey results on evaluating students' actual and expected abilities to use employability diagnostic systems to develop role-play learning and workshop teaching models, using employability diagnostic systems as the foundation for electronic learning to promote employability skills.

Part 4: Survey results on evaluating students' views on the actual and expected conditions of model development, developing a role-play learning and workshop teaching model, using an employability diagnostic system as the foundation for electronic learning to promote employability. There are have 5 evaluation stages, including student and teaching activity organization, electronic learning environment, measurement and evaluation of employment ability improvement effects, etc.

Part 1: Results of basic Information of Questionnaire Respondents

Table 9 shows the results of basic Information of Questionnaire Respondents

Item	Detail	Number	Percentage
1. Basic personal information			
1.1 Gender	Male	38	21.11%
	Female	137	76.11%
1.2 Age	18-19	18	11.04%
	20-21	54	33.12%
	22-23	91	55.82%
1.3 Grade being studied	First year	29	19.33%
	Second year	36	24%
	Third year	85	56.67%
1.4 Major	E-commerce	141	82.94%

Item	Detail	Number	Percentage
	Marketing management	11	6.47%
	Business administration	10	5.88%
	Secretary	8	4.71%
1.5 Region			
	North	1	0.56%
	South	146	81.11%
	Central section	3	1.67%
	West	20	11.11%
	Eastern	2	1.11%
	Other	3	1.67%
2. Job interview experience			
	Have	77	42.78%
	Not have	98	54.44%
3. Academic record			
	Excellent	22	12.22%
	Good	93	51.67%
	Medium	6	3.33%
	Range	6	2.78%
4. Role playing and workshop learning experience			
	Have	62	34.44%
	Not have	113	62.78%
5. Previous knowledge or training related to simulated interviews			
	Have	58	32.23%
	Not have	117	65%

From Table 9 above, we can see that a total of 150 undergraduates from China Vocational College of Yunnan University of Finance and Economics participated in this questionnaire, and the results are as follows:

Regarding gender, there are more girls than boys, with 137 girls (76.11%) and 38 boys (21.11%).

Regarding age, students aged 22-23 have the highest proportion(55.82%), students aged 20-21 have the second highest proportion (33.12%), and students aged 18-19 have the third highest proportion (11.04%).

Regarding the grades being studied, the third grade had the most students, accounting for (56.67%), the second most students in the second grade, accounting for (24%), and the third most students in the first grade, accounting for 19.33%.

Regarding majors, e-commerce majors have the highest number of students, accounting for (82.94%), marketing majors had the second highest number of students, accounting for (6.47%) , and business management majors had the third highest number of students, accounting for (5.88%);

Regarding geography, the southern region had the highest number of students, accounting for (81.11%) , the western region had the second highest number of students, accounting for (11.11%) , and the central region had the third highest number of students, accounting for (1.67%) ;

Regarding job interview experience, the majority of students had no job interview experience, accounting for (54.44%), while a small number of students have job interview experience, accounting for (42.78%). It can be seen that most students had no learning experience in simulated interviews.

Regarding academic performance, students reported the most good academic performance, accounting for (51.67%) , followed by students who reported average academic performance, accounting for 30%, and students who reported excellent academic performance, accounting for (12.22%);

Regarding role-play and workshop learning experiences, the majority of students have no experience in role-play or workshop teaching, accounting for (62.78%). A small number of students had reported no relevant experience, accounting for 34.44%.

Regarding previous knowledge or training related to simulated interviews, the majority of students reported not receiving relevant training (65%), while a small number of students reported receiving relevant training (32.22%).

Based on the above data description, the characteristics of the research subjects and the questionnaire responses meet the expectations of the researchers, especially for most students who had no role-play learning or workshop learning experience, and had relatively few simulated interview learning practices. Therefore, it is possible to study and develop a role-play learning and workshop teaching model, using an employability diagnostic system as the foundation for electronic learning to improve employability skills.

Part 2: Evaluate the survey results on the availability of electronic information technology among students. This includes knowledge level, general knowledge and skills in using information technology, as well as equipment for using multimedia, networks, and digital videos. The results of data analysis in various aspects are as follows:

1. Result of the degree of mastery of information technology

Table 10 shows the average, PNI values, and importance of students' the degree of mastery of information technology. Develop a role-play-based learning and workshop teaching model, using an employability diagnostic system as the foundation for e-learning to promote employability skills.

Evaluation list	Expected Ability	Actual Ability	PNI	Important rank
Questions	(I)	(D)		
1. Degree of Information technology mastery				
1.1 Minimal (can be used for communication, such as online chatting, email, video calls, etc.)	4.35	3.78	0.151	3
1.2 Medium (can be used for	4.27	3.55	0.203	2

Evaluation list	Expected Ability	Actual Ability	PNI	Important rank
Questions	(I)	(D)		
communication and learning, such as searching for online learning resources such as Mooc YouTube SlideShare, etc.).				
1.3Very useful for communication, learning, and sharing or disseminating information, such as creating and producing online learning media, developing programs, or learning websites.	4.26	3.49	0.221	1

From Table 10, it can be seen that the research results in various aspects are as follows:

The needs for mastery of information technology. By analyzing the importance level of their arrangement, we found that the top three items in importance ranking are as follows: Questionnaire 1.3 items "Very useful for communication, learning, and sharing or disseminating information, such as creating and producing online learning media, developing programs, or learning websites", ranking first in importance (PNI=0.221); Questionnaire 1.2 item "Medium (can be used for communication and learning, such as searching for online learning resources such as Mooc YouTube SlideShare, etc.)", ranking second in importance (PNI=0.221); Item 1.1 of

the questionnaire is "Minimal (can be used for communication, such as online chatting, email, video calls, etc.)", ranking third in importance (PNI=0.221);

2.Result of the ability to use electronic information technology

Table 11 shows the average, PNI values, and importance of students' actual and expected abilities in using information technology. Develop a role-playing learning and workshop teaching model, using an employability diagnostic system as the foundation for e-learning to promote employability skills.

Evaluation list	Expected Ability	Actual Ability	PNI	Important rank
Questions	(I)	(D)		
2. Ability to use electronic information technology				
2.1 Be able to use graphic Engineering design process (such as Photoshop, Illustrator, Industrial, etc.).	4.22	3.15	0.340	4
2.2 Ability to design applications using networks (such as dreamweaver, wordpress, joomla, appserve, Filezilla, etc.).	4.12	2.97	0.387	2
2.3 Ability to use 2D&3D applications (such as 3D Studio MAX, maya Cinema4D, SketchUp, Lightwave3D, After Effect, etc.)	4.01	2.84	0.412	1
2.4 Able to use Digital Video Production (such as Adobe Production, Adobe Photoshop, After Effect).	3.96	2.87	0.380	3

From Table 11, it can be seen that the research results in various aspects are as follows:

The needs for the ability to use electronic information technology. By analyzing the importance level of their arrangement, we found that the top three items in importance ranking are as follows: Questionnaire 2.3, "Ability to use 2D&3D applications (such as 3D Studio MAX, maya Cinema4D, SketchUp, Lightwave3D, After Effect, etc.)", ranked first in importance (PNI=0.412); Questionnaire item 2.2 "Ability to use web design applications (such as dreamweaver, wordpress, joomla, appserve, Filezilla, etc.)", ranked second in importance (PNI=0.387); Questionnaire item 2.4 "Ability to use Digital Video Production (such as Adobe Production, Adobe Photoshop, After Effect)". (PNI=0.380);

3. Result of the ability to use various system platforms

Table 12 shows the average, PNI values, and importance of students' actual and expected abilities in using ability to use various system platforms. Develop a role-play learning and workshop teaching model, using an employability diagnostic system as the foundation for e-learning to promote employability skills.

Evaluation list	Expected Ability	Actual Ability	PNI	Important rank
Questions	(I)	(D)		
3. Ability to use various system platforms				
3.1 Proficient in using various learning systems, apps, and platforms in the school.	4.27	3.57	0.196	1
3.2 Able to use various network devices for online learning.	4.33	3.63	0.193	2

From Table 12, it can be seen that the research results in various aspects are as follows:

The needs for the ability to use electronic information technology. By analyzing the importance level of their arrangement, we found that the top three items in importance ranking are as follows: By analyzing the importance level of their arrangement, we found that the top three items in importance ranking are as follows: Item 3.1 of the questionnaire states "Proficient use of various learning systems, apps, and platforms in the school", ranking first in importance (PNI=0.196); Item 3.2 of the questionnaire states "Being able to use various network devices for online learning", ranking second in importance (PNI=0.193);

Based on the above data description, we can see that the students participating in the questionnaire survey have basically mastered a certain level of information technology and have a certain foundation in electronic learning. They hope to learn through electronic information technology and proficiently use various system platforms to improve learning efficiency. The questionnaire response situation meets the expectations of the researchers. Therefore, it was possible to study and develop a role-play learning and workshop teaching model, using an employability diagnostic system as the foundation for electronic learning to improve employability skills.

Part 3: Survey results on evaluating students' actual and expected abilities to use employability diagnostic systems to develop role-play learning and workshop teaching models, using employability diagnostic systems as the foundation for e-learning to promote employability skills. The results of data analysis in various aspects are as follows:

1. Functions of the employability diagnosis system

Table 13 shows the average, PNI values, and importance of students' actual and expected abilities about functions of the employability diagnosis system. Develop a role-play learning and workshop teaching model, using an employability diagnostic system as the foundation for e-learning to promote employability skills.

Evaluation list	Expected Ability	Actual Ability	PNI	Important rank
	(I)	(D)		
1.Functions of the employability diagnosis system				
1.1 Learning tests can be taken using the employability diagnostic system.	4.20	3.40	0.235	8
1.2 Learning reports can be downloaded from the Employability Diagnostic System.	4.24	3.40	0.247	7
1.3 Online learning is available in the Employability Diagnostic System.	4.25	3.40	0.250	6
1.4 You can monitor your learning progress in the Employability diagnostic system.	4.27	3.39	0.260	5
1.5 You can engage in learning, communication, and interaction with teachers and classmates in the employability diagnosis system.	4.27	3.35	0.267	4

1.6 You can view the individual situation of employability in the Employability diagnosis system.	4.27	3.37	0.267	4
1.7 You can view the results of the Achievement test in the Employability diagnosis system.	4.26	3.36	0.268	3
1.8 Test reports can be downloaded from the employability diagnostic system.	4.27	3.35	0.275	1
1.9 You can view the employability diagnosis diversion label in the Employability diagnosis system.	4.23	3.32	0.274	2
2.0 You can select the corresponding employment guidance based on the diversion label in the Employability diagnosis system.	4.22	3.31	0.275	1

From Table 13, it can be seen that the research results in various aspects are as follows:

The needs for the functions of the employability diagnosis system .By analyzing the importance level of their arrangement, it found that the top three items in importance ranking were as follows: Item 1.8 of the questionnaire states that "the test report can be downloaded from the employability diagnosis system" (PNI=0.275), and

Item 2.0 of the questionnaire states that "the corresponding employment guidance can be selected based on the diversion label in the employability diagnosis system", ranking equally first in importance (PNI=0.275); Item 1.9 of the questionnaire states that the employability diagnosis diversion label can be viewed in the employability diagnosis system, ranking second in importance (PNI=0.274); 1.7 items of the questionnaire "can view the results of the Achievement test in the employability diagnosis system", ranking third in importance (PNI=0.268);

2. Services related to the employability diagnostic system

Table 14 The average number, PNI value, and importance level of students' actual and expected abilities about the services related to the employability diagnostic system. Develop a role-play learning with workshop teaching model, using the employability diagnostic system as the basis for e-learning to promote employability skills.

Evaluation list	Expected Ability	Actual Ability	PNI	Important rank
	(I)	(D)		
2. Background services for the employability diagnosis system				
2.1 The teaching assistant can help answer the chat box questions in the Employability diagnosis system.	4.22	3.35	0.260	1
2.2 Exclusive customer service can be online, answer questions in a timely manner, and monitor the smoothness of testing.	4.18	3.39	0.233	2

From Table 14, it can be seen that the research results in various aspects are as follows:

The needs for the background services of the employability diagnosis system. By analyzing the importance level of their arrangement, we found that the top three items in importance ranking were as follows: Questionnaire item 2.1 "Teaching assistants can help teachers answer the chat box questions in the employability diagnosis system", ranking first in importance (PNI=0.260); Questionnaire item 2.2 "Exclusive customer service can be online, answer questions in a timely manner, monitor the smoothness of testing", ranking second in importance (PNI=0.233);

3. The effectiveness of the employability diagnostic system

Table 15 The average number, PNI value, and importance level of students' actual and expected abilities about the effectiveness of the employability diagnostic system.

Develop a role-play learning and workshop teaching model, using the employability diagnostic system as the basis for e-learning to promote employability skills.

Evaluation list	Expected Ability	Actual Ability	PNI	Important rank
	(I)	(D)		
3. The effectiveness of the employability diagnostic system				
3.1 The employability diagnosis system can support the improvement of job application abilities.	4.21	3.36	0.253	4
3.2 The employability diagnosis system can support the improvement of professional and technical abilities.	4.24	3.37	0.258	2
3.3 The employability diagnosis system can	4.24	3.38	0.254	3

Evaluation list	Expected Ability	Actual Ability	PNI	Important rank
	(I)	(D)		
support the improvement of interpersonal communication skills.				
3.4The employability diagnosis system can support the improvement of self-development ability.	4.25	3.40	0.250	5
3.5The employability diagnosis system can support the improvement of emotional regulation ability.	3.37	4.32	0.282	1

From Table 15, it can be seen that the research results in various aspects are as follows:

The needs for the effectiveness of the employability diagnostic system. By analyzing the importance level of their arrangement, we found that the top three items in importance ranking were as follows: Questionnaire item 3.5 "Employability diagnosis system can support the improvement of emotional regulation ability", ranking first in importance (PNI=0.282); Item 3.2 of the questionnaire states that the employability diagnosis system can support the improvement of professional and technical abilities, ranking second in importance (PNI=0.258); Questionnaire item 3.3 "Employability diagnosis system can support the improvement of interpersonal communication skills", ranking third in importance (PNI=0.254);

Based on the above data description, we can see that students have a high overall evaluation of the employability diagnosis system, which meets the expectations of researchers. Therefore, the employability diagnosis system can be used to develop role-play learning and workshop teaching models to improve students' employability skills.

Part 4: Survey results on evaluating students' views on the actual and expected conditions of model development, developing a role-play learning and workshop teaching model, using an employability diagnostic system as the foundation for e-learning to promote employability. 5 evaluation stages, including student and teaching activity organization, electronic learning environment, measurement and evaluation of employment ability improvement effects, etc.

1.Regarding learners and teaching staff

Table 16 The average, PNI value, and importance level of students' views on the actual and expected conditions of learners and teaching staff. Develop a role-play learning and workshop teaching model, using an employability diagnostic system as the basis for e-learning to promote employability skills.

Evaluation list	Expected conditions	Realistic conditions	PNI	Important rank
	(I)	(D)		
1.Regarding learners and teaching staff				
1.1Teaching staff conduct academic performance evaluation tests before class.	4.22	3.39	0.245	4
1.2Teaching staff conduct after-school learning performance evaluation tests	4.23	3.40	0.244	5

1.3The division of study groups is scientific.	4.26	3.32	0.283	1
1.4The division of learning groups takes into account individual differences among students (gender, age, major, region, motivation, expectations, etc.).	4.22	3.37	0.252	3
1.5The teacher demonstrated empathy and praise, and strengthened the learners' learning motivation.	4.26	3.39	0.257	2

From Table 16, it can be seen that students' views on the actual and expected conditions for the development of role-play learning and workshop teaching models were analyzed, and the employability diagnostic system was used as the basis for electronic learning to promote employability skills. It has identified the following requirements in various aspects.

The needs for the learners and teaching staff. By analyzing the importance level of their arrangement, it found that the top three items in importance ranking are as follows: Questionnaire item 1.3 "The division of learning groups is scientific", ranking first in importance (PNI=0.282); Questionnaire item 1.5 "Teachers demonstrate empathy and praise, and reinforce learners' learning motivation", ranking second in importance (PNI=0.257); The division of learning groups in item 1.4 of the questionnaire takes into account individual differences among students (gender, age, major, region, motivation, expectations, etc.), ranking third in importance (PNI=0.252);

2.Regarding organizational aspects of teaching activities

Table 17 The average, PNI value, and importance level of students' views on the actual and expected conditions of organizational aspects of teaching activities. Develop a role-play learning and workshop teaching model, using an employability diagnostic system as the basis for e- learning to promote employability skills.

Evaluation list	Expected conditions	Realistic conditions	PNI	Important rank
	(I)	(D)		
2.Organizational aspects of teaching activities				
2.1 The organization of teaching activities can enable students to learn in the practice of improving their employability skills.	4.28	3.35	0.278	1
2.2 The establishment of teaching activities is linked to the	4.27	3.34	0.278	1

Evaluation list	Expected conditions	Realistic conditions	PNI	Important rank
	(I)	(D)		
improvement of employability skills, such as conducting employment counseling, simulated interviews, scenario drills, case studies, and other activities.				
2.3 Teaching staff should provide extracurricular video materials to students before conducting classroom activities.	4.29	3.40	0.262	2
2.4 Teachers organize learning activities, starting from the problems with students' employability and finding solutions to these problems.	4.30	3.42	0.257	4
2.5 Teachers organize activities with a focus on providing opportunities for all learners to	4.29	3.41	0.258	3

Evaluation list	Expected conditions	Realistic conditions	PNI	Important rank
	(I)	(D)		
engage in practical training for improving employment skills.				
2.6 Teaching activities encourage students to respect and understand cultural differences.	4.30	3.42	0.257	4
2.7 Teaching staff organize activities that emphasize rule-based reasoning and judgments based on reliable data.	4.26	3.45	0.235	5

From Table 17, it can be seen that students' views on the actual and expected conditions for the development of role-play learning and workshop teaching models were analyzed, and the employability diagnostic system was used as the basis for electronic learning to promote employability skills. We have identified the following requirements in various aspects.

The needs for the teaching activities. By analyzing the importance level of their arrangement, it found that the top three items in importance ranking were as follows: Item 2.1 of the questionnaire states that "the organization of teaching activities can enable students to learn in the practice of improving their employability" and Item 2.2 of the questionnaire states that "the establishment of teaching activities was related to the improvement of employment skills, such as conducting employment counseling,

simulated interviews, scenario drills, case studies, and other activities", ranking first in importance (PNI=0.278); Item 2.3 of the questionnaire states that "teaching staff should provide extracurricular video materials to students before conducting classroom activities", ranking second in importance (PNI=0.262); Questionnaire item 2.4 "Teachers organize learning activities, starting from the problems of students' employability to find solutions to employability problems", ranked third in importance (PNI=0.258);

3.Regarding e-learning environment

Table 18 The average, PNI value, and importance level of students' views on the actual and expected conditions of e-learning environment. Develop a role-play learning and workshop teaching model, using an employability diagnostic system as the basis for e-learning to promote employability skills.

Evaluation list	Expected conditions	Realistic conditions	PNI	Important rank
	(I)	(D)		
3. Electronic learning environment				
3.1 Use electronic information technology for teaching management.	4.17	3.46	0.205	5
3.2 By using various electronic devices on the internet, learning materials can be accessed anytime and	4.31	3.48	0.239	1

Evaluation list	Expected conditions	Realistic conditions	PNI	Important rank
	(I)	(D)		
3. Electronic learning environment anywhere.				
3.3 The degree of electronic sharing is relatively high.	4.29	3.47	0.236	3
3.4 Using diverse social network applications in teaching management.	4.26	3.50	0.217	4
3.5 Use technology to communicate between learners.	4.32	3.49	0.238	2

From Table 18, it can be seen that the research results in various aspects are as follows:

The needs for the E-learning environment. By analyzing the importance level of their arrangement, it found that the top three items in importance ranking are as follows: Questionnaire item 3.2 "Using various electronic devices on the internet to access learning materials anytime and anywhere" ranks first in importance (PNI=0.239); Questionnaire item 3.5 "Using technology to communicate between

learners" ranks second in importance (PNI=0.238); Question 3.3:"High level of electronic sharing", ranking third in importance (PNI=0.236);

4.Regarding measurement and evaluation aspects

Table 19 The average, PNI value, and importance level of students' views on the actual and expected conditions of measurement and evaluation aspects. Develop a role-play learning and workshop teaching model, using an employability diagnostic system as the basis for e-learning to promote employability skills.

Evaluation list	Expected conditions	Realistic conditions	PNI	Important rank
	(I)	(D)		
4.Measurement and evaluation aspects				
4.1 Weekly teaching evaluation.	4.19	3.42	0.225	1
4.2 The homework is consistent with the course content.	4.22	3.60	0.172	4
4.3 There are corresponding teaching evaluation theories.	4.22	3.58	0.179	3
4.4 There is a teaching practice evaluation.	4.28	3.58	0.196	2
4.5 Student participation in model	4.28	3.58	0.196	2

Evaluation list	Expected conditions	Realistic conditions	PNI	Important rank
	(I)	(D)		
4.Measurement and evaluation aspects evaluation.				

From Table 19, it can be seen that the research results in various aspects are as follows:

The needs for the measurement and evaluation .By analyzing the importance level of their arrangement, -it found that the top three items in importance ranking were as follows:By analyzing the importance level of their arrangement, it found that the top three items in importance ranking are as follows:Questionnaire item 4.1 "Weekly teaching evaluation", ranking first in importance (PNI=0.225); Questionnaire item 4.4 "Teaching Practice Evaluation" and questionnaire item 4.5 "Student Participation Model Evaluation", ranking second in importance (PNI=0.196); Item 4.3 of the questionnaire states that there was a corresponding teaching evaluation theory, ranking third in importance (PNI=0.179);

5.Regarding improving employment ability

Table 20 The average, PNI value, and importance level of students' views on the actual and expected conditions of improving employment ability. Develop a role-play learning and workshop teaching model, using an employability diagnostic system as the basis for e-learning to promote employability skills.

Evaluation list	Expected conditions	Realistic conditions	PNI	Important rank
	(I)	(D)		
5.Effectiveness of improving employability skills				
5.1Enhancing students'	4.29	3.47	0.236	2

Evaluation list	Expected conditions	Realistic conditions	PNI	Important rank
	(I)	(D)		
5. Effectiveness of improving employability skills				
employability through model learning.				
5.2 Promoted the improvement of students' employability through the testing of the employability diagnostic system.	4.35	3.50	0.243	1

From Table 20, it can be seen that the research results in various aspects are as follows:

The needs for the effectiveness of improving employability skills. By analyzing the importance level of their arrangement, we found that the top three items in importance ranking were as follows: Item 5.2 of the questionnaire "Promoting the improvement of students' employability through the employability diagnostic system test" ranks first in importance (PNI=0.243); Questionnaire item 5.1 "Enhancing students' employability through model learning" ranks second in importance (PNI=0.236);

Based on the above data description, we can see that students expect to improve their employability through role-playing learning and workshop teaching models. They hope to improve learning efficiency through scientific grouping activities, -which meets the expectations of researchers. Therefore, it can study and

develop a role-play learning combined with workshop teaching model to enhance students' employability skills.

The research results on semi-structured interviews

IOC experts results of the semi-structured interviews was 0.67-1.00. The research results on semi-structured interviews as follows:

Aspect 1: Regarding conditions and requirements

1. Role (teacher and learner)

1) Students lack self-directed learning ability, self-control ability, and self-monitoring ability.

2) The utilization rate of e-learning technology among students was not high.

3) Students' enthusiasm and interest in using electronic learning are not very high.

4) Teachers' abilities in designing and creating electronic learning need to be improved, and it was necessary to enhance their electronic teaching skills.

5) Learners should learn and participate in interest based learning design, which can be used for their future career.

6) Important factors in role-play should be taken into account, namely the roles of teachers and learners,

7) Making it worthwhile for learners to spend time studying and working.

8) Utilize big data to collect information, improve teachers' ability to analyze data, and provide corresponding support for education management.

9) Students may not understand a particular lesson.

10) Students were not aware of their roles, processing time, and the risks of not achieving the expected learning outcomes.

11) The learning needs of students;

2. Learning environment (e-learning based on employability diagnosis system)

1) Design an employability based e-learning environment.

It should include:

a) Learning support system;

b) Courses related to career needs;

c) Learning steps/processes;

d) Evaluate and provide feedback to improve the lack of skills or knowledge.

2) The system should have the option to prioritize steps. -At the same time, in terms of hardware.

3) A system capable of collecting and analyzing data, as well as an instant messaging platform.

4) Simultaneously consider preparing various factors in advance for input and process execution, and be alert to potential complications.

The electronic learning system was easy to use and operate, enabling students to quickly learn and meet their needs.

3. Teaching (learning) media

1) Media or devices used for role-play, events, etc,

2) Use media technology.

3) Emphasize the use of diverse teaching media to assist in the presentation of teaching content.

4) The system should have the function of guiding students to establish open thinking and be ready to learn new things at any time.

5) The learning system used must be able to participate in learning at any time and place;

6) Assisted learning systems must have diversity corresponding to different skills;

7) The items used must be convenient, clear, and easy for students to use;

8) There must be a learning assistant in the system to let students know which areas of skills need improvement (conclusion evaluation feedback, allowing students to guide which areas need improvement).

9) There needs to be a system for studying employability skills.

10) There are need an assistant to answer students' questions.

11) Electronic learning technologies and accessible devices may not be fully available;

12) Using big data for learning management,

13) Artificial intelligence assisted learning;

14) Recommendation systems for various types of learning. A diverse question and answer system.

4. Learning activities

1) Online courses based on game activities;

2) Activities and evaluations.

3) Design rich and interesting skill training activities that can stimulate students' interest in learning and cultivate true professional skills.

4) Create activities that allow students to work together. Provide case studies to encourage students to creatively solve problems.

5) Online learning interactive activities.

6) Provide opportunities for joint action for the event.

7) Activity performance must be able to promote and create the knowledge and skills required for practical work, and meet the employment needs of employers.

5. Teaching process (five steps)

1) The learning process, role-play, and workshop teaching should be clear and comprehensive.

2) According to the teaching objectives and content of the teaching stage, flexibly determine the stage of using the employability diagnosis system to assist teaching.

3) The model did not proceed as planned.

4) Design concise steps.

5) Learning process;

It includes:

a) Preschool guidance;

b) Theme selection and design;

c) Learning process detection;

d) Learning and practice;

e) Post learning guidance.

6. Teaching strategies

1) Using blended learning;

2) Provide positive incentives, such as rewards for good exam results.

3) Before starting role-play activities, teachers should demonstrate and provide examples for students.

4) Design controls for variable complications to prevent or minimize them.

5) Create an environment. Before implementing the patterns that need to be designed, clarification, understanding, and demonstration should be provided to enhance monitoring and evaluation.

6) Clarify goals, explain themes, break down tasks, have mentors throughout the process, actively answer students' questions, analyze and provide feedback (opinions) after learning.

7) Design teaching plans using a blended learning approach, integrate components and programs of an e-learning based employability diagnosis system, as well as role-play based learning and workshop teaching.

7. Evaluation Testing

1) Guide students to enhance their e-learning thinking, make good use of the characteristics and functions of the online employment ability diagnosis system, and guide students to independently complete the learning of teaching content.

2) Guide students to actively participate in role-play learning and workshop teaching activities offline.

3) Guide learners to reflect on which areas are crucial for employability, which areas are lacking, and which areas require continuous improvement.

4) Pay attention to students' level of activity and completion towards this learning method.

8. Feedback

1) The system should have the function of guiding learning progress.

2) Timely follow up on students' learning progress.

3) Feedback from teachers (students).

4) Provide channels for teachers to respond and provide feedback.

5) The system should have the function of responding or providing feedback to students.

6) During the learning process, the system should display the evaluation progress and provide improvement feedback.

7) Achieved through teacher and peer review. Student evaluation was a learning activity between students.

8) Provide feedback on-site and online.

Through interviews with the aforementioned experts, researchers can summarize their viewpoints and use them as guidelines for designing and developing role-play learning and workshop based teaching models. Using an employability diagnostic system as the foundation for e-learning to promote employability skills.

Phasell develop a role-play learning with workshop teaching model, and use employability diagnosis system as the foundation for e-learning to promote employability enhancement.

Phasell (D1): Result of the develop a role-play learning with workshop teaching model, by using employability diagnostic system to enhance employability skills .

This part was to evaluate the style and structure of the draft role-play learning and workshop teaching models, using the employability diagnostic system as the basis for e-learning to improve employability skills.

The results of role-play learning with workshop teaching model

IOC experts results of the draft of role-play learning with workshop teaching model is 0.67-1.00.The result of role-play learning with workshop teaching model.

It is divided into two parts:

Part 1: A style evaluation on the role-play learning with workshop teaching model, using an employability diagnostic system as the foundation for e-learning to promote employability enhancement.

Part 2: A structured evaluation list on the role-play learning with workshop teaching model, using an employability diagnostic system as the foundation for e-learning to promote employability enhancement.

The results of the expert evaluation are as follows:

The evluation from five model experts of the graphic model it founded the average was high level(Mean=4.85,S.D.=0.33),it means that the graphic model was very appropriate.

According to model expert opinions, different colors were annotated on the model and explained to make the model more clear.

The components of role-play learning and workshop teaching model have eight components:1)Role (teacher and learner); 2) Learning Environment(E-Learning Based on employability diagnostic system); 3) Teaching (learning) media; 4) Learning Activity;5)Teaching process (five processess);6)Teaching (Learning)

Strategies 7) Evaluation Test 8) Feedback from teachers (students).The media of role-play learning and workshop teaching model contain:1)Employability diagnostic system;2)Computer、 Smartphone、 Tablet;3)PPT、 Video、 Sound、 Pitcure、 Card、 Paper、 Color pen;4)WeChat and QQ learning groups-;5)Employability Test form.

The process of role-play learning with workshop teaching model consisted five process as follows :

- 1) Process 1: Learn extracurricular content. (Online)
- 2) Process 2: Prepare for classroom activities. (Online)
- 3) Process 3: Learning course content (offline)
- 4) Process4: Summary of learning content (offline);
- 5) Process 5: Learning Effectiveness Test (offline).

Teacher (Input): (Online) theoretical knowledge and test was taught through employability diagnostic systems, (offline) practical knowledge is completed through role-play-based learning activities and workshop teaching activities. Course teaching - setting questions - organizing activities - assigning tasks - summarizing - organizing tests((employability diagnostic systems)

Learner (Output): (Online) theoretical knowledge and test was learned through employability diagnostic systems, (Offline) practical knowledge was completed through role-play learning activities and workshop teaching activities. Course learning - answering questions - participating in activities - completing tasks - reporting reflections - participating in tests(employability diagnostic system)

Table 21 shows the style evaluation of the role-play learning and workshop teaching model draft based on the employability diagnostic system, which was based on e-learning to promote employability skills.

Evaluation problem	Mean	S.D.	The meaning
Evaluation of model Style			
1.1 The principles, concepts, theories, etc. of model design are appropriate and consistent.	4.80	0.45	Very appropriate
1.2 The purpose of the model is appropriate.	5.00	0.00	Very appropriate
1.3 The model diagram shows the appropriate element and process relationships.	5.00	0.00	Very appropriate
1.4 The model diagram can accurately express and is easy to understand.	4.40	0.55	Very appropriate
1.5 The draft model reflects the combination of online and offline, theoretical and practical learning.	4.60	0.55	Very appropriate
Totally average	4.76	0.31	Very appropriate

As can be seen from Table 21, regarding the quality evaluation of role-play learning and workshop teaching model draft styles, the overall average level was relatively high (Mean=4.76, S.D.=0.31).

By calculating the mean and standard deviation of each item in the model draft style, it found that the top three items are as follows: the average of items 1.2 “The purpose of the model is appropriate” and item 1.3 “The model diagram shows the appropriate element and process relationships” of the evaluation list ranks first, (Mean=5.00,SD=0.00);Item 1.1 “The principles, concepts, theories, etc. of model design are appropriate and consistent” in the list ranks second, (Mean=4.80, SD=0.45), and the average value of the item1.5 “The draft model reflects the combination of online and offline, theoretical and practical learning” in the list ranks third, with an average level of (Mean=4.60, SD=0.55).

The evaluation results of model style were Very appropriate, consistent with and quality requirements.

The results of model structure. Table 26-28 shows the structure evaluation of the role-play learning with workshop teaching model based on the employability diagnostic system, which was based on e-learning to promote employability skills.

Table 22 The result of roles

Item	Mean	S.D.	The meaning
Evaluation of model structure			
1. The roles			
1.1 The draft model includes complete roles (Teaching staff and learners)	4.80	0.45	Very appropriate
1.2 The draft model reflects the two-way interaction between roles.	4.60	0.55	Very appropriate
Total average	4.70	0.50	Very appropriate

As can be seen from Table 22, in terms of roles, the overall mean is higher (Mean=4.70, S.D.=0.50) regarding the quality evaluation of the draft structure of role-playing learning and workshop teaching models.

By calculating the mean and standard deviation of each item in the role aspect, it was found that the top three items are as follows: the mean value of item 1.1 “The draft model includes complete roles (Teaching staff and learners)” in the evaluation list ranks first, (Mean=4.80, S.D.=0.45), and the mean value of item 1.2 “The draft model reflects the two-way interaction between roles” in the list ranks second, (Mean=4.60, S.D.=0.55).

The evaluation results show that the role aspects of the draft role-play learning and workshop teaching model were highly suitable and meet the quality requirements.

Table 23 The results of Learning activities

Item	Mean	S.D.	The meaning
Evaluation of model structure			
2. Learning activities			
2.1 Role-play and workshop practice exchange activities are diverse and diverse.	4.80	0.45	Very appropriate
2.2 Role-play and workshop activities have proposed phased solutions around the theme of enhancing employability.	4.80	0.45	Very appropriate
2.3 The learning activity can improve the employability skills.	4.80	0.45	Very appropriate
2.4 The assignment matching with the activity.	4.80	0.45	Very appropriate
Total average	4.80	0.45	Very appropriate

It can be seen from Table 23 that in terms of learning activities, regarding the quality evaluation of the draft structure of role-play learning and workshop teaching models, the overall mean was higher (Mean=4.80, S.D.=0.45).

By calculating the mean and standard deviation of each item in terms of learning activities, the result found that the means of all items were very appropriate (Mean=4.80, S.D.=0.45).

The evaluation results show that the learning activities of the draft role-play learning and workshop teaching model learning environment were highly suitable and meet the quality requirements.

Table 24 The result of Learning environment

Item	Mean	S.D.	The meaning
Evaluation of model structure			
3.Learning environment			
3.1The availability of technical equipment and materials that support internet learning.	4.80	0.45	Very appropriate
3.2Learning materials can be accessed anytime and anywhere on the Internet using a variety of electronic devices.	4.80	0.45	Very appropriate
3.3Providing a classroom atmosphere conducive to electronic learning.	4.80	0.45	Very appropriate
3.4Interesting and diverse learning courses are provided in the classroom, encouraging learners to participate in role-play learning and workshop activities.	4.80	0.45	Very appropriate
3.5Encourage learners to engage in employability enhancement thinking in role-play learning with workshop learning environments.	5.00	0.00	Very appropriate
Total average	4.80	0.39	Very appropriate

As can be seen from Table 24, regarding the quality evaluation of the learning environment of the draft role-play learning and workshop teaching model, the overall average level was (Mean=4.80, SD=0.39).

By calculating the mean and standard deviation of each item in the learning environment of the draft model, the result found that the top three items are as follows: the mean value of item 3.5 “Encourage learners to engage in employability enhancement thinking in role-play learning with workshop learning environments. in the evaluation list ranks first, (Mean=5.00, S.D.=0.00), lists 3.1 “The availability of technical equipment and materials that support internet learning” item 3.2 “Learning materials can be accessed anytime and anywhere on the Internet using a variety of electronic devices”. The average values of items 3.3 “Providing a classroom atmosphere conducive

to electronic learning” and 3.4 “Interesting and diverse learning courses are provided in the classroom, encouraging learners to participate in role-play learning and workshop activities. are tied for second place, (Mean=4.80, SD=0.45).

The evaluation results show that all aspects of the draft role-play learning and workshop teaching model learning environment were highly suitable and meet the quality requirements.

Table 25 The result of Learning strategy

Item	Mean	S.D.	The meaning
Evaluation of model structure			
4.Learning strategy			
4.1 Role-playing learning strategies and employability enhancement topics fit in.	5.00	0.00	Very appropriate
4.2 Workshop teaching theory and employability promotion theme it fits.	4.60	0.55	Very appropriate
4.3 Combination of role-play learning and workshop teaching mode support employability.	4.80	0.45	Very appropriate
Total average	4.80	0.33	Very appropriate

As can be seen from Table 25, regarding the quality assessment of learners in the draft role-play learning and workshop teaching models, the overall mean was higher (Mean=4.80,S.D.=0.33).

By calculating the mean and standard deviation of each item on the learner side of the draft model, it found that the top three items are as follows: the mean of item 4.1 “Role-play learning strategies and employability enhancement topics fit in” in the assessment list ranks first, (Mean=5.00,SD=0.00), and the mean of item 4.3 “Combination of role-playing learning and workshop teaching mode support employability” in the assessment list ranks first Tied for second, (Mean=4.80,

SD=0.45),and the average of the item 4.2 “Workshop teaching theory and employability promotion theme it fits” in the list ranked third, (Mean=4.60, SD=0.55).

The evaluation results showed that all aspects of the draft learning strategies for role-play learning and workshop teaching models were highly suitable, consistent with and quality requirements.

Table 26 The result of Teaching process

Item	Mean	S.D.	The meaning
Evaluation of model structure			
5.Teaching process			
5.1 The teaching process of the model draft is complete.	5.00	0.00	Very appropriate
5.2 The teaching process of the model draft is closely linked.	5.00	0.00	Very appropriate
5.3 The teaching process match with the role-play learning with workshop teaching model.	5.00	0.00	Very appropriate
Total average	5.00	0.00	Very appropriate

As can be seen from Table 26,regarding the quality evaluation of the teaching process of role-play learning and workshop teaching model draft,the overall mean was higher (Mean=5.00, SD=0.00).

By calculating the mean and standard deviation of each item in the teaching process of the draft model,it found that the mean of all items in the evaluation list ranked first, (Mean=5.00, SD=0.00).

The evaluation results showed that all aspects of the teaching process regarding the draft role-play learning and workshop teaching model were highly appropriate and met the quality requirements.

Table 27 The result of Support Tools

Item	Mean	S.D.	The Meaning
Evaluation of model structure			
6.Support Tools			
6.1 A variety of teaching tools have been used in the classroom, which are convenient and easy to use.	4.80	0.45	Very appropriate
6.2 The selection of teaching tools can support employability promotion practice.	4.80	0.45	Very appropriate
6.3 The tool helps students track their progress in employability.	5.00	0.00	Very appropriate
Total average	4.90	0.30	Very appropriate

As can be seen from Table 27, regarding the quality evaluation of supporting tools for role-play learning and workshop teaching model drafts, the overall average is higher (Mean=4.90, S.D.=0.30).

By calculating the mean and standard deviation of each item in the draft model support tool, it found that the top three items were as follows: the mean of item 6.3 “The tool helps students track their progress in employability” in the evaluation list ranks first, (Mean=5.00, S.D.=0.00), item 6.1 “A variety of teaching tools have been used in the classroom, which were convenient and easy to use” in the list and item 6.2 “The selection of teaching tools can support employability promotion practice” average ranks second, with an average level of (Mean=4.80, S.D.=0.45).

The evaluation results showed that all aspects regarding the draft supporting tools for role-play learning and workshop teaching models were highly suitable and meet the quality requirements.

Table 28 The result of Feedback

Item	Mean	S.D.	The meaning
Evaluation of model structure			
7.Feedback			
7.1 The feedback from teachers and students reflects two-way interaction.	4.60	0.55	Very appropriate
7.2 Feedback is beneficial for students to timely summarize and reflect on their knowledge.	4.80	0.45	Very appropriate
7.3 The Employment ability diagnostic system can support the feedback tool for students.	4.80	0.45	Very appropriate
Total average	4.73	0.48	Very appropriate

As can be seen from Table 28 regarding the quality evaluation of role-play learning and feedback on the draft workshop teaching model, the overall mean was higher (Mean=4.73, SD=0.48).

By calculating the mean and standard deviation of each item in the model draft feedback, it found that the top three items were as follows: the average of items 7.2 "Feedback is beneficial for students to timely summarize and reflect on their knowledge" and 7.3 "The Employment ability diagnostic system can support the feedback tool for students" in the evaluation list ranks first, (Mean=4.80, S.D.=0.45), and item 7.1 "The feedback from teachers and students reflects two-way interaction." in the evaluation list ranks first. The mean was tied for second place, (Mean=4.60, S.D.=0.55).

The evaluation results showed that all aspects of the feedback on the draft model for role-play learning and workshop teaching were highly appropriate, consistent with quality and requirements.

Table 29 The result of Evaluation

Item	Mean	S.D.	The meaning
Evaluation of model structure			
8.Evaluation			
8.1The improvement of learners' employability was evaluated before and after class.	4.80	0.45	Very appropriate
8.2Measure and evaluate students based on their actual weekly learning situation, including theory and practice.	4.80	0.45	Very appropriate
8.3Evaluated learners' satisfaction with model learning.	5.00	0.00	Very appropriate
Total average	4.90	0.30	Very appropriate

As can be seen from Table 29, regarding the quality evaluation of role-play learning and workshop teaching model draft evaluation, the overall mean was higher, (Mean=4.90, S.D.=0.30).

By calculating the mean and standard deviation of each item in the draft model evaluation, it found that the top three items are as follows: the average of item 8.3 “Evaluated learners' satisfaction with model learning” in the evaluation list ranks first, (Mean=5.00, S.D.=0.00), items 8.1 “The improvement of learners' employability was evaluated before and after class” and 8.2 “Measure and evaluate students based on their actual weekly learning situation, including theory and practice.in the list The mean was tied for second place, (Mean=4.80, S.D.=0.45).

The results of the evaluation showed that all aspects regarding the evaluation of the draft model for role-play learning and workshop teaching were highly suitable and met the quality requirements.

The evaluation results indicate that all aspects of role-play learning and the evaluation of the draft workshop teaching model are very appropriate and meet the quality requirements.

Five experts' comments and suggestions on the graphic model.

Comment:

Regarding the first aspect of the "role" in the structural evaluation of the model draft, experts believe that the interaction between teachers and students was slightly vague, while "face to face" summarizes everything, which seems a bit vague.

Suggestion:

1) Regarding the 7th aspect of "feedback" in the evaluation of the model draft structure, experts suggest that teachers guide students to learn how to analyze and utilize the feedback report in a timely manner after it is generated.

2) Suggest enriching and improving the content by adding (refining) learning feedback links and teacher-student interaction; To display the measurement and evaluation of students before and after learning, it was necessary to be able to show how to use them in the model draft diagram. It was recommended to further improve the action roadmap for these two links (pre test report and post test report) in the entire draft diagram, forming a closed loop.

Through the evaluation of the above experts, researchers can summarize their viewpoints, further improve role-play learning and workshop teaching models, and write targeted teaching plans that match the teaching models to better use them in the third stage of experiments. Employability diagnosis systems are used as the foundation for electronic learning to promote employability skills.

The results of lesson plan

This part was to evaluate role-play learning with workshop lesson plans, using the employability diagnostic system as the foundation for e-learning to improve employability skills.

The results of the expert evaluation are as follows:

The IOC expert evaluation values for each item in the lesson plan were between 0.67 and 1.00. The evaluation from five model experts of the lesson plan we founded the average is 4.85, it means that the lesson plan is very appropriate. Overall, the five experts have a high evaluation of the teaching plan and believe that it was highly feasible.

The lesson plan was divided into six weeks, it includes seven parts: 1) Learning time, 2) Learning objective, 3) Learning content, 4) Learning activity, Learning media, Measurement and Evaluation, and Products. The lesson plan was divided into **six weeks** in total, with **five learning processes**. Each stage is matched with corresponding learning content, corresponding learning activities were designed, suitable learning media is selected, and homework tasks and **12 small quizzes** were arranged every week. Among them, **the first process** is to learn extracurricular content through the employability diagnosis system, **the second process** was to prepare for classroom activities through media such as PPTs, pictures, videos, sounds, and physical objects, **the third process** was mainly to carry out employability practice activities through role-play learning with workshop teaching model, **the fourth process** was mainly to reflect and summarize through role-play learning and workshop teaching model, and teachers and students engage in two-way feedback and interaction, **The fifth process** mainly utilizes the employability diagnostic system to conduct weekly quizzes and timely verify the learning effectiveness.

The organizational process of the lesson plan was as follows:

Process 1: Learn extracurricular content. (Online)

Teaching staff:

- 1) After explaining the course schedule to the students, they were required to log in to the system and engage in weekly online learning activities.
- 2) Arrange online learning resources in advance through the employability diagnosis system platform based on the weekly content and learning objectives.
- 3) Release learning task notifications in advance through the employability diagnosis system platform.

Learners:

- 1) Online learning materials (online learning). Online learning resources released by online learning instructors in the employability diagnosis system.

2) Write a review diary. After studying materials every week, students summarize and reflect on the knowledge gained from the research materials before classroom activities

3) Receive task notifications through the employability diagnostic system.

Process 2: Prepare for classroom activities. (Online)

In this process, it will discuss questions, ask students about their usage, review their learning content, engage in extracurricular activities, and reward online learning knowledge to enhance the answers of the winners or participants.

Teaching staff: Prepare questions in the courseware of the employability diagnosis system platform. Learner: Prepare your smartphone and access the employability diagnosis system platform.

Process 3: Learning course content (offline)

The use of role-play learning and workshop teaching modes provides interesting content.

Teaching staff (workshop practice activities) work together to find various problem-solving methods; Course members can ask questions, express opinions, and participate in evaluations and propose solutions together.

Learners (role-play practice activities) jointly comment and choose the best solution;

Process 4: Summary of learning content (offline)

Teaching staff: Summarize the learning content for this week.

Learner: Reflect on the learning content of this week.

Course members can ask questions, express opinions, and participate in evaluations and propose solutions together.

Process 5: Learning Effectiveness Test (Offline)

Small test. Provide solutions.

Five experts' comments and suggestions on the lesson plan.

Comment:

The design of the third stage is excellent, both hands-on and brainy, which can enhance students' sense of participation and effectively teach theoretical knowledge through practical operations. Summary: Based on the above description, this lesson plan can be used for role-play learning with workshop teaching model, using an employability diagnostic system as the foundation for e-learning to promote employability skills.

Suggestion:

- 1) Some plans may even increase educational incentives by providing additional rewards.
- 2) The course plan does not specify the LMS used to provide online learning. Please specify additional information (if any).
- 3) Regarding the teaching plan for the first week, can "writing a study plan" be expressed as: writing a study plan tailored to the course based on the pre class learning content and one's own career pursuit.
- 4) Suggest adjusting the order of the first and second items in the "homework" section of the lesson plan: "1) Students report their learning gains this week as a group" and "Conduct a discussion activity on employment delay recruitment models in the form of an employability improvement workshop".
- 5) Further thinking is needed on how to truly and effectively achieve the weekly teaching goals in the five teaching stages of each week?
- 6) Is the Career Decision Balance Sheet (see Attachment 4) too complex for the second week's teaching plan? We need to add more teacher activities here to explain Attachment 4.
- 7) Regarding the third week learning plan and the preparation of classroom activities for the second stage, how can we evaluate the student ranking? Will the system automatically generate rankings in a certain way.
- 8) Regarding the fourth and fifth stage of the "Learning Effectiveness Test", if there is time left, consider setting up the "Resume Modification" stage.

Phase III The results of learning effectiveness of role-play learning with workshop teaching models is utilized, and the employability diagnostic system is used as the foundation for electronic learning to promote employability skills.

Research results on employability test

Researchers conducted employability tests on 50 samples. Test subjects using a five level self-assessment question. It includes 92 options, a 50 minute test, and an evaluation of 8 aspects. Conduct a 6-week experiment, retest again, and compare the paired samples through t-test statistics. The research results are shown in Table 35.

Table 30 presents a comparison of pre - and post learning test results for students in the eight sub dimensions of employability diagnosis

	Pre-test		Post-test		t-test
	Mean	S.D.	Mean	S.D.	
1. Employment willingness	2.59	0.84	2.71	0.94	-6.075*
2. Goal identification	3.20	0.71	3.45	0.89	-5.861*
3. Job Analysis	3.21	0.91	3.66	0.86	-7.293*
4. Human capital confidence	2.75	0.88	3.54	0.90	-8.705*
5. Job opportunity mining	2.66	0.93	3.21	0.94	-5.007*
6. Job performance	3.09	0.85	4.57	0.77	-8.860*
7. Monitoring and regulation	3.19	0.84	3.67	0.87	-4.073*
8. Job search efficacy	3.10	0.88	3.53	0.79	-5.010*
Overall average	2.97	0.86	3.54	1.32	

P<0.05*

From Table 30, it can be seen that regarding the evaluation of the effectiveness of using role-play learning and workshop teaching model learning, the overall mean and standard deviation after learning (Mean=3.54,S.D.=1.32)were higher than those before learning (Mean=2.97, S.D.=0.86).

By comparing the average and standard deviation of the eight aspects of the employability test before and after learning, it was found that all of the employability diagnosis were significant <0.05 .

The comparison of the average scores of pre-test and post-test employability tests based on samples is mainly divided into eight parts, as shown in Tables 36-45:

Part 1: About Employment Willingness

Table 31 shows the comparison of average scores of students before and after learning in terms of employment willingness

Part 1: Employment willingness	Pre-test		Post-test		t-test
	Mean	S.D.	Mean	S.D.	
1.Working and not working have a significant impact on me.	1.30	0.54	1.86	0.97	-
2.Entering the workplace is a meaningful thing that deserves my serious investment.	1.48	0.71	1.88	1.06	6.075*
3.Even if my family's financial conditions permit, I also want to work.	1.94	0.10	2.08	0.99	
4.I don't have to start looking for a job because I have nowhere to go after graduation.	1.78	0.91	2.04	1.05	
5.I didn't have to start looking for a job to meet my family's expectations.	1.76	0.92	2.04	0.93	
6.Although I don't work and my family won't object, I am still in a hurry to find a job.	1.62	0.83	2.02	0.85	
7.I still worry about employment and won't expect my family to help me arrange work.	1.42	0.58	1.90	0.91	
8.Although the process of finding a job is too complicated, I still want to try more.	1.62	0.70	1.92	0.90	
9.The income after work can help my family share the pressure, so I am willing to work.	3.82	1.04	3.82	1.17	
10.Working after graduation allows me to be financially independent, which attracts me.	3.88	1.06	4.44	0.86	
11.I really want to find employment and can't wait to test	3.02	0.85	3.10	1.20	

Part 1: Employment willingness	Pre-test		Post-test		t-test
	Mean	S.D.	Mean	S.D.	
and prove my abilities.					
12.Work can create value for organizations and society, so I am willing to work.	3.24	0.92	3.58	1.05	
13.Work can help me achieve my life goals.	3.62	0.95	3.64	1.08	
14.The work experience itself will be very interesting, and I am looking forward to it very much.	3.20	0.83	3.68	1.10	
Overall average	2.41	0.85	2.71	1.01	

P<0.05*

From Table 31, it can be seen that regarding the evaluation of the effectiveness of using role-play learning with workshop teaching models for learning, the comparison of pre - and post learning test results in terms of employment intention among students shows that the overall mean and standard deviation after learning (Mean=2.71,S.D.=1.01)were higher than those before learning(Mean=2.41, S.D.=0.85).

Through the comparison of the average and standard deviation of Employment willingness before and after learning in the employability test,it was found that all of the employability diagnosis were significant<0.05.

Part 2: About Goal Identification

2.1 Student performance in terms of target status

Table 32 shows the comparison of pre learning and post learning test results for students' goal identification

Target status	Pre-test		Post-test		t-test
	Mean	S.D.	Mean	S.D.	
1.There is a rough direction for employment.	2.40	0.97	2.70	1.02	-
2.There is a clear intention to seek employment.	3.00	0.88	3.22	0.86	5.861*
3.Can state/write specific job search goals (rather than IT or finance).	2.74	0.85	2.94	0.10	

Target status	Pre-test		Post-test		t-test
	Mean	S.D.	Mean	S.D.	
4.Job search goals do not change frequently.	2.50	0.95	2.88	0.87	
Overall average	2.66	0.91	2.94	0.94	

P<0.05*

From Table 32, it can be seen that regarding the evaluation of the effectiveness of students' use of role-play learning and workshop teaching models in learning, the comparison of pre learning and post learning test results in goal identification-target status among students shows that the average and standard deviation after learning (Mean=2.94, S.D.=0.94) were higher than those before learning (Mean=2.66, S.D.=0.91).

Through the comparison of the average and standard deviation of goal identification-target status before and after learning in the employability test, all of the employability diagnosis were significant<0.05.

2.2 Specific manifestations of students' decision-making information power

Table 33 shows the comparison of pre learning and post learning test results in terms of information power among students

Decision information power	Pre-test		Post-test		t-test
	Mean	S.D.	Mean	S.D.	
1.Having carefully considered one's interests and preferences.	3.24	0.80	3.54	0.91	-
2.I have carefully explored my personality.	3.56	0.73	3.60	0.95	5.861*
3.Carefully review your strengths and weaknesses in terms of abilities.	3.60	0.73	3.66	0.92	
4.Carefully analyzed the employment situation and policies.	3.10	0.91	3.48	0.93	
5.Explore potential employment opportunities through multiple channels.	3.52	0.71	3.70	0.95	
6.Clarity the criteria for individuals to make choices (i.e.	3.20	0.78	3.66	0.80	

Decision information power	Pre-test		Post-test		t-test
	Mean	S.D.	Mean	S.D.	
professional values).					
7.Compare various possible options in multiple dimensions.	3.32	0.77	3.70	0.81	
8.Conduct comprehensive job information collection.	3.08	0.78	3.64	0.78	
9.Ask for the opinions of important others around you.	3.84	0.76	3.80	0.84	
10.Strive for the support of important others around you for your decisions.	3.66	0.85	3.76	0.80	
Overall average	3.41	0.78	3.65	0.87	

P<0.05*

From Table 33, it can be seen that regarding the evaluation of the effectiveness of students using role-play learning with workshop teaching models, the comparison of pre - and post learning test results in terms of information decision-making ability shows that the average and standard deviation after learning (Mean=3.65, S.D.=0.87) were higher than those before learning (Mean=3.41, S.D.=0.78).

Through the employability test, the average and standard deviation of goal identification decision-making information power before and after learning were compared. It was found that all of the employability diagnosis were significant <0.05.

Part 3 Job Analysis

Student Work Analysis Specific Situation Test

Table 34 shows the comparison of pre study and post study test results for students in job analysis

Job Analysis	Pre-test		Post-test		t-test
	Mean	S.D.	Mean	S.D.	
1.Understand specific and official job titles.	3.20	0.83	3.56	0.91	-7.293*
2.Understand job responsibilities (not job responsibilities).	3.06	0.91	3.60	0.88	
3.Understand job responsibilities.	3.12	0.92	3.66	0.90	
4.Understand work relationships (superiors, subordinates, peers).	2.94	0.96	3.60	0.86	

Job Analysis	Pre-test		Post-test		t-test
	Mean	S.D.	Mean	S.D.	
5.Understand the mandatory job qualifications (such as education, major, certificate, etc.).	3.66	0.87	3.86	0.73	
6.Understand the required knowledge and skills.	3.74	0.85	3.76	0.72	
7.Understand soft employment standards (such as communication and coordination, innovation cooperation, etc.).	3.56	0.88	3.56	0.99	
8.Understand the salary range.	3.58	0.86	3.76	0.89	
9.Understand career development paths and spaces.	3.24	0.92	3.70	0.81	
10.Can provide the name of the employer (i.e. representative organization) for the target position.	3.12	0.94	3.66	0.92	
11.Clearly represent the industry to which the organization belongs.	3.30	0.95	3.64	0.88	
12.Clearly understand the position within the organizational workforce structure.	3.02	1.00	3.62	0.88	
13.Clearly understand the development trends of the industry and their impact on the position.	3.08	0.97	3.66	0.87	
14.Clearly understand the culture, values, vision of representative organizations, and their impact on target positions.	2.92	0.90	3.68	0.82	
15.Clearly understand the business operation models of representative organizations and their impact on target positions.	2.86	0.88	3.64	0.90	
16.Clearly understand the strategy and future development trends of representative organizations, as well as their impact on target orientation.	2.92	0.90	3.66	0.87	
Overall average	3.21	0.91	3.66	0.86	

P<0.05*

From Table 34, it can be seen that regarding the evaluation of the effectiveness of students' use of role-play learning and workshop teaching models, the comparison of pre learning and post learning test results in job analysis shows that the average and standard deviation after learning (Mean=3.66,S.D.=0.86)were higher than those before learning (Mean=3.21, S.D.=0.91).

Through the employability test, the average and standard deviation of job analysis before and after learning were compared.,it was found that all of the employability diagnosis were significant<0.05.

Part four Human Capital Confidence

Student Performance in Capital Confidence

Table 35 shows the comparison of pre learning and post learning test results for students' confidence in human capital

Human capital confidence	Pre-test		Post-test		t-test
	Mean	S.D.	Mean	S.D.	
1.I am not worried that my current level of knowledge and ability may not be able to handle the job at hand.	3.10	0.86	3.90	0.7	-
2.Compared to job seekers with higher visibility at my school, I still have competitiveness.	2.86	0.99	3.32	0.8	5*
3.Education is not an obstacle to achieving my job search goals.	2.74	0.80	3.42	0.8	
4.I have relevant practical, part-time/internship experience, which greatly enhances my job competitiveness.	2.96	0.93	3.82	1.0	
5.The professional training in college has given me the confidence to adapt and survive in the workplace.	2.74	0.80	3.64	0.8	
6.A teacher or professional once commented on me, saying, "This is a great worker."o	2.70	0.10	3.30	0.9	
7.In the labor market where my target position is located, I believe that I am a coveted job.	2.16	0.79	3.36	1.0	
Overall average	2.75	0.88	3.54	0.9	0

P<0.05*

From Table 35, it can be seen that regarding the evaluation of the effectiveness of students' use of role-play learning and workshop teaching models, the comparison of pre and post learning test results in terms of human capital confidence

shows that the average and standard deviation after learning (Mean=3.54,S.D.=0.90)were higher than those before learning (Mean=2.75 0,SD=0.88).

Through the employability test,the average and standard deviation of human capital confidence before and after learning were compared,it was found that all of the employability diagnosis were significant<0.05.

Part 5 Opportunity mining

Testing of Students in Collecting Employment Information and Mining Opportunities

Table 36 shows a comparison of pre - and post learning test results for students in opportunity mining

Job opportunity mining	Pre-test		Post-test		t-test
	Mean	S.D.	Mean	S.D.	
1.Overall,I know how to gather more employment/internship information.	2.86	0.99	3.16	1.02	- 5.007*
2.I don't feel like I have very few job opportunities, it won't make me anxious.	2.86	0.95	3.80	0.88	
3.I understand why others know so many job opportunities.	2.66	0.87	3.38	0.90	
4.I will collect employment information through a single channel such as the internet or job fairs.	2.54	0.81	3.54	0.97	
5.I am able to establish extensive connections with teachers, friends, senior brothers, and sisters to gather job opportunities.	2.62	0.81	3.54	0.81	
6.I have ample time to search for job opportunities and obtain more employment information.	3.02	1.04	3.22	0.95	
7.In addition to submitting a resume online, I will proactively contact people to obtain more employment information or seek employment opportunities.	2.70	1.04	2.80	0.99	
8.I know there are some channels to obtain employment information, and I will use these channels.	2.76	0.98	2.90	0.95	
9.For me, the information provided by the school is sufficient.	2.32	0.94	2.84	0.93	

	Pre-test		Post-test		t-test
	Mean	S.D.	Mean	S.D.	
Job opportunity mining					
10.I believe that the current employment information/internship opportunity resources/information I have are sufficient.	2.28	0.90	2.96	0.97	
Overall average	2.66	0.93	3.21	0.93	

P<0.05*

From Table 36, it can be seen that regarding the evaluation of the effectiveness of students using role-play learning and workshop teaching models, the comparison of pre - and post learning test results in job opportunity mining shows that the average and standard deviation after learning (Mean=3.21,S.D.=0.94).were higher than before learning (Mean=2.66,S.D.=0.93).

Through the employability test,the average and standard deviation of job opportunity mining before and after learning were compared, it was found that all of the employability diagnosis were significant<0.05.

Part 6 Job performance

6.1 Resume self-assessment ability evaluation

Table 37 shows the comparison of pre - and post learning test results among students in resume self-assessment

	Pre-test		Post-test		t-test
	Mean	S.D.	Mean	S.D.	
Standards for resumes					
1.Based on a thorough analysis of one's target position.	3.02	0.87	3.60	0.76	-
2.The job search intention is very specific.	2.78	0.84	3.40	0.83	8.860*
3.Professionalization of format and style.	3.00	0.86	3.50	0.86	
4.Professionalization of written expression.	2.96	0.83	3.50	0.79	
5.Key verbs that reflect the requirements of the target position.	2.98	0.80	3.48	0.76	
6.There is sufficient evidence to prove one's abilities and strengths.	2.88	0.85	3.50	0.84	
7.Priority should be given to displaying key and targeted content.	3.34	0.92	3.52	0.71	

Standards for resumes	Pre-test		Post-test		t-test
	Mean	S.D.	Mean	S.D.	
8.Overall, I will be very satisfied with my resume.	2.74	0.85	3.60	0.83	
Overall average	2.96	0.85	3.51	0.80	

P<0.05*

From Table 37, it can be seen that regarding the evaluation of the effectiveness of students using role-play learning with workshop teaching model for learning, the comparison of pre - and post learning test results in resume self evaluation showed that the average and standard deviation after learning (Mean=3.51,S.D.=0.80)were higher than those before learning (Mean=2.96, S.D.=0.85).

Through the employability test, a comparison was made between the average and standard deviation of job performance before and after self-review of resumes, it was found that all of the employability diagnosis are significant<0.05.

6.2 Self evaluation of interview ability

Table 38 shows the comparison of pre learning and post learning test results among students in self-assessment during interviews

Interview ability	Pre-test		Post-test		t-test
	Mean	S.D.	Mean	S.D.	
1.Based on a thorough analysis of the target position.	3.04	0.86	3.54	0.71	-
2.Specific job search intentions.	3.06	0.91	3.60	0.78	8.860*
3.Anticipate interview questions in advance.	3.14	0.93	3.64	0.75	
4.Conduct interview drills in advance.	3.30	0.95	3.64	0.72	
5.Dress professionally.	3.62	0.78	3.60	0.73	
6.Speak logically and clearly.	3.38	0.81	3.62	0.73	
7.Etiquette professionalization.	3.48	0.74	3.60	0.81	
8.Presented sufficient evidence to demonstrate capabilities and advantages.	3.10	0.81	3.60	0.73	
9.Showcasing one's personality.	3.18	0.75	3.74	0.72	

10.Overall, I am very confident in my (future) interview.	2.64	1.01	3.54	0.79
Overall average	3.19	0.85	3.61	0.75

P<0.05*

From Table 38, it can be seen that regarding the evaluation of the effectiveness of students using role-playing learning and workshop teaching models, the comparison of pre - and post learning test results in terms of interview self core ability shows that the average and standard deviation after learning (Mean=3.61, S.D.=0.75)were higher than those before learning (Mean=3.19, S.D.=0.85).

Through the employability test, a comparison was made between the average and standard deviation of the pre study and post study self-evaluation tests on resumes.,it was found that all of the employability diagnosis were significant<0.05.

Part 7: Monitoring and Adjustment

Table 39 shows the comparison of pre learning and post learning test results among students in self-assessment during interviews

Part 7: Monitoring and Adjustment	Pre-test		Post-test		t-test
	Mean	S.D.	Mean	S.D.	
1.After each written test/interview, I am able to habitually review my performance and summarize my experiences and lessons.	3.46	0.73	3.56	0.84	- 4.073
2.I am good at observing and absorbing good job seeking experiences from others, and applying them to my own job search process.	3.52	0.79	3.58	0.731	
3.If the job search goes against me, it will make me feel depressed for a long time.	2.84	0.87	2.94	0.89	
4.When encountering difficulties during the job search process, I will not be confused or at a loss.	3.04	0.90	3.32	0.91	
5.If I fail my job search so many times, I won't give up on myself.	2.32	0.82	2.70	1.04	
6.I am able to plan and arrange various job search activities in advance.	3.38	0.83	3.42	0.86	
7.I will keep track and update my job search progress in a timely	3.18	0.92	3.46	0.81	

Part 7: Monitoring and Adjustment	Pre-test		Post-test		t-test
	Mean	S.D.	Mean	S.D.	
manner, so I have a clear understanding of the whereabouts of my resume.					
8.I am able to maintain a positive attitude throughout the job search process.	3.22	0.74	3.68	0.82	
9.If my job search is unsuccessful, my good friends or family can listen to me or give me encouragement.	3.78	0.93	3.64	0.90	
Overall average	3.19	0.84	3.37	0.87	

P<0.05*

From Table 39, it can be seen that regarding the evaluation of the effectiveness of students using role-playing learning and workshop teaching models for learning, the comparison of pre test and post learning test results in interview self-evaluation showed that the average and standard deviation after learning (Mean=3.37, SD=0.87) were higher than those before learning (Mean=3.19, S.D.=0.84).

Through the employability test, the average and standard deviation of pre study and post study resume self-evaluation were compared.,it was found that all of the employability diagnosis were significant<0.05.

Part 8: Job search efficacy

Specific analysis of students' job search efficacy

Table 40 shows the comparison of pre - and post learning test results on job search efficacy among students

Job search efficacy	Pre-test		Post-test		t-test
	Mean	S.D.	Mean	S.D.	
1.I believe I can get the job I want.	3.14	0.86	3.66	0.75	-
2.I think in the end, I can get multiple satisfactory offers (more than 1).	2.94	0.935	3.56	0.73	5.010*
3.If I try my best, I will definitely be able to solve the problems	3.36	0.80	3.70	0.74	

		Correlation							
		Employment willingness	Goal identification	Job Analysis	Human capital confidence	Job opportu nity mining	Job search performanc e	Monitor ing and adjust ment	Job search efficacy
Employment willingness	Pearson correlation	1	.084	-.047	.137	.367**	-.262	-.009	.137
	Significance (Double tailed)		.562	.743	.342	.009	.066	.950	.342
Goal identification	Pearson correlation	.084	1	.835**	.527**	.268	.680**	.688**	.510**
	Significance (Double tailed)	.562		.000	.000	.060	.000	.000	.000
Job Analysis	Pearson correlation	-.047	.835**	1	.535**	.235	.807**	.803**	.619**
	Significance (Double tailed)	.743	.000		.000	.101	.000	.000	.000

		Correlation							
		Employment willingness	Goal identific ation	Job Analysis	Human capital confidence	Job opportu nity mining	Job search performanc e	Monitor ing and adjust ment	Job search efficacy
Human capital confiden ce	Pears on correl ation	.137	.527**	.535**	1	.570**	.512**	.478**	.583**
	Signifi cance (Doub le tailed)	.342	.000	.000		.000	.000	.000	.000
Job opportu nity mining	Pears on correl ation	.367**	.268	.235	.570**	1	.094	.231	.328*
	Signifi cance (Doub le tailed)	.009	.060	.101	.000		.516	.107	.020
Job search perform ance	Pears on correl ation	-.262	.680**	.807**	.512**	.094	1	.748**	.612**
	Signifi cance (Doub le tailed)	.066	.000	.000	.000	.516		.000	.000

		Correlation							
		Employment willingness	Goal identification	Job Analysis	Human capital confidence	Job opportunity mining	Job search performance	Monitoring and adjustment	Job search efficacy
Monitoring and adjustment	Pearson correlation	-.009	.688**	.803**	.478**	.231	.748**	1	.621**
	Significance (Double tailed)	.950	.000	.000	.000	.107	.000		.000
Job search efficacy	Pearson correlation	.137	.510**	.619**	.583**	.328*	.612**	.621**	1
	Significance (Double tailed)	.342	.000	.000	.000	.020	.000	.000	

** At the 0.01 level (two tailed), the correlation is significant.

* At the 0.05 level (two tailed), the correlation is significant.

$r < 0.05^*$

From the results in Table 41, it can be seen that after learning role-playing learning and workshop teaching models, students have a positive correlation with the average employability tests in eight aspects. The correlation between each aspect was as follows:

There was a positive correlation between employment intention and job opportunity exploration significantly, and the correlation was at a low level (0.21-0.50).

There was a positive correlation between goal identification and job analysis significantly, and the correlation is at a high level (0.81-1.00). Goal identification is positively correlated with human capital confidence, job performance, monitoring regulation, and job search efficacy, and the correlation was at a moderate level (0.51-0.80).

There was a positive correlation between job analysis and goal identification significantly, and the correlation was at a high level (0.81-1.00). Job analysis was positively correlated with human capital confidence, job performance, monitoring and regulation, job search efficacy significantly, and the correlation was at a moderate level (0.51-0.80).

Human capital confidence was positively correlated with goal identification, job analysis, job opportunity mining, job performance, monitoring and regulation, and job efficacy significantly, with a moderate correlation (0.51-0.80).

There was a positive correlation between job opportunity exploration and human capital confidence significantly, and the correlation was at a moderate level (0.51-0.80). Job opportunity exploration was positively correlated with employment intention and job search efficacy significantly, and the correlation was at a low level (0.21-0.50).

There was a positive correlation between job performance and job analysis, and the correlation was at a high level (0.81-1.00). Job performance was positively correlated with goal identification, human capital confidence, monitoring and regulation, and job search efficacy significantly, and the correlation was at a moderate level (0.51-0.80).

Monitoring regulation and job analysis were positively correlated, and the correlation was at a high level (0.81-1.00). Monitoring regulation was positively correlated with target identification, job performance, and job efficacy significantly, and

the correlation was at a moderate level (0.51-0.80). There was a positive correlation between monitoring regulation and human capital confidence significantly, and the correlation is at a low level (0.21-0.50).

There was a positive correlation between job search efficacy and monitoring regulation significantly, and the correlation was at a moderate level (0.51-0.80). Job search efficacy was positively correlated with goal identification, job analysis, human capital confidence, job opportunity exploration, and job performance significantly, with a moderate correlation (0.51-0.80).

The results of Student Satisfaction Survey

Table 42 The result of general information survey results of the survey respondents.

List	List Style	Number	Percentage
1. Gender	Male	13	26%
	Female	37	74%
2. Age	20-21	14	28%
	22-23	33	66%
	23-24	1	2%
	25-26	2	4%
3. Area	North	0	0%
	South	22	44%
	Central	1	4%
	Eastern	0	0%
	Southwest	25	50%
	Northeast	1	2%
4. The major you are studying:	E-commerce	50	100%
5. The grade you are studying:	Third grade	50	100%
6. What device do you use for model learning activities?			
	(1) Smartphone	44	88%
	(2) Ipad	24	48%
	(3) Desktop computer	8	16%
	(4) Portable computer (eg .notebook/ laptops / macbook Air .etc)	30	60%

List	List Style	Number	Percentage
7. What time did you use in extracurricular learning activities?			
	(1)Time range from 9:00 to 12:00	32	64%
	(2)Time range from 1pm to 3pm	28	56%
	(3)Time from 6pm to 19pm	6	12%
	(4)Time from 7:00 pm to 9:00 pm	27	54%
	(5)Time range from 22.00 to 24.00	10	20%
	(6)Time starting from 1am	3	6%
8.What positions have you used in extracurricular learning activities?			
	(1)Home/Residence	31	62%
	(2)School	48	96%
	(3)Shop	3	6%
	(4)Coffee Shop/Restaurant/ co -Working Space	15	30%
	(5)Other	9	18%

According to Table 42 above, it can be seen that among the undergraduate students participating in this survey at Zhonghua Vocational College of Yunnan University of Finance and Economics, a total of 50 students answered this questionnaire. The results were as follows:

Regarding gender, the number of female respondents (74%) was more than male (26%).

Regarding age, students aged 22-23 have the highest proportion (66%), students aged 20-21 have the second highest proportion (28%), and students aged 25-26 have the third highest proportion (4%).

Regarding the grades being studied, all are senior graduates, accounting for (100%).

Regarding majors, they were all e-commerce majors, accounting for (100%).

Regarding geography, the Southwest region has the highest number of students, accounting for 50%, the South region has the second highest number of students, accounting for 44%, and the Central region has the third highest number of students, accounting for 4%.

Regarding the use of devices for model learning activities, the number of students using smartphones for learning is the highest, accounting for 88%. Students using portable computers (such as notebooks/laptops/macbook air, etc.) for learning are the second highest, accounting for 60%. Students using tablets for learning were the third highest, accounting for 48%.

Regarding the time used in extracurricular learning activities, students with a learning time range from 9:00 to 12:00 accounted for the most (64%), while students with a learning time range from 1 pm to 3 pm were the second most (64%); The third most students, accounting for 54%, have study time from 7:00 to 9:00 in the evening.

Regarding the use of location in extracurricular learning activities, students who engage in extracurricular learning activities in school have the highest proportion (96%), followed by students who engage in extracurricular learning activities at home/residence (62%), and students who engage in extracurricular learning activities at coffee shops/restaurants have the third highest proportion (30%).

Based on the above data description, the characteristics of the research subjects and the questionnaire responses are in line with the sample characteristics and the expectations of the researchers. Therefore, students can participate in role-play learning and satisfaction surveys of workshop teaching models, and use employability diagnostic systems as the basis for electronic learning to improve employability skills.

1.Regarding learners and teaching staff

Table 43 The result of satisfaction evaluation on learners and teaching staff

Evaluaiion Item	Mean	S.D	The meaning
1.Teaching staff and learners			
1.1 The teaching staff explained and clarified the learning mode to the students.	4.24	1.24	Satisfied
1.2The ability of teachers to organize classroom teaching activities.	4.28	1.20	Satisfied
1.3The ability of teachers to organize extracurricular teaching activities	4.16	1.22	Satisfied
1.4 Teachers create opportunities to encourage students to express their opinions, exchange ideas, and learn with students from different cultures or regions.	4.22	1.22	Satisfied
1.5 This teaching method hold a positive attitude towards people from different cultures.	4.30	1.17	Satisfied
1.6 Students are able to conduct rational analysis,distinguish and evaluate based on reliable data.	4.30	1.18	Satisfied
1.7 The method of solving problems can make students more insightful,	4.20	1.14	Satisfied
1.8 Problem solving methods can provide students with more insight.	4.32	1.16	Satisfied
Overall average	4.25	1.17	Satisfied

From Table43,it can be seen that in terms of teaching staff and learners, the overall average satisfaction evaluation of role-play learning and workshop teaching models,all items were satisfied (Mean=4.25, S.D.=1.17).

By calculating the average and standard deviation of each item for learners and teaching staff, it was found that the top three items were as follows:**The first**

rank is "Solving problems can make students more insightful," with satisfied (Mean=4.32, S.D.=1.15); **The second rank** was "Students hold a positive attitude towards people from different cultures" with very satisfied (Mean=4.30, S.D.=1.17), and "Students can apply the principles they have learned in and out of the classroom to their future job hunting activities or work", with satisfied (Mean=4.30, S.D.=1.18); **The third rank** was "Teacher's ability to organize classroom teaching activities", with very satisfied (Mean=4.28, SD=1.20).

2. The process of organizing teaching activities

Table 44 The result of satisfaction evaluation on the process aspects of organizing teaching activities

Evaluation Item	Mean	S.D	The meaning
2. The process of organizing teaching activities			
2.1 Teaching stage (lecture research)	4.30	1.15	Satisfied
2.2 Preparation stage for classroom activities.	4.22	1.13	Satisfied
2.3 Workshop exchange activities (employment consultation)	4.24	1.15	Satisfied
2.4 Case analysis (scenario simulation)	4.32	1.13	Satisfied
2.5 Employment Capacity Enhancement Plan	4.30	1.15	Satisfied
2.6 Brainstorming stage (workshop activity)	4.26	1.12	Satisfied
2.7 Propose solutions in stages (workshop activity)	4.32	1.13	Satisfied
Overall average	4.28	1.14	Satisfied

From Table 44, it can be seen that, regarding the process of organizing teaching activities, the overall average satisfaction evaluation of role-play learning and workshop teaching models, all items were satisfied (Mean=4.28, S.D.=1.14).

By calculating the average and standard deviation of each item for learners and teaching staff, it was founded that the top three items were as follows: **The first rank** was "Case analysis (scenario simulation)" with satisfied (Mean=4.32, S.D.=1.13) and "Stage proposed solutions" with very satisfied (Mean=4.32, S.D.=1.13). **The second rank** was "teaching stage" (Mean=4.30, S.D.=1.15) and "employability improvement

plan",with satisfied(Mean=4.30, SD=1.13).The third rank was“Brainstorming stage (workshop activity)”,with satisfied (Mean=4.28, S.D.=1.20).

3.Learning environment (environment)

Table 45 The result of satisfaction evaluation on learning environment

Evaluaion Item	Mean	S.D	The meaning
3.Learning environment (environment)			
3.1 Availability of technical equipment and materials supporting internet learning	4.38	1.12	Satisfied
3.2 Access learning materials anytime and anywhere using various electronic devices on the internet.	4.36	1.12	Satisfied
3.3 Provide a classroom atmosphere conducive to E-learning, such as having each learner share a job interview case using the Employability diagnostic system.	4.24	1.12	Satisfied
3.4 Provide interesting and diverse learning courses in the classroom and encourage students to participate in activities.	4.34	1.14	Satisfied
3.5 Encourage learners to think about enhancing their employability in an electronic learning environment, both internally and externally.	4.36	1.16	Satisfied
Overall average	4.34	1.83	Satisfied

From Table 45, it can be seen that in terms of learning environment, the overall average of satisfaction evaluations for role-play learning and workshop teaching models is relatively high (Mean=4.34, S.D.=1.83).

By calculating the average and standard deviation of each item in the learning environment, it was found that the top three items were as follows:**The first rank** was "Availability of Technical Equipment and Materials Supporting Internet Learning."with satisfied (Mean=4.38,S.D.=1.12);**The second rank** was "Accessing learning materials anytime and anywhere using various electronic devices on the

Internet"with satisfied (Mean=4.36, S.D.=1.12) and "Encouraging learners to think about improving their employability in an electronic learning environment from both internal and external learning environments"with satisfied (Mean=4.36,S.D.=1.16);**The third rank** was"Providing interesting and rich learning courses in the classroom and encouraging students to participate in activities"with satisfied (Mean=4.34, S.D.=1.14).

4.Learning support tools

Table 46 The result of satisfaction evaluation on learning support tools in the Employability diagnostic system.

Evaluaiion Item	Mean	S.D.	The meaning
4. In terms of learning support tools in the Employability diagnostic system.			
4.1 Students can use the Employability diagnostic system.	4.30	1.13	Satisfied
4.2 Convenient communication for students on the Employability diagnostic system.	4.34	1.14	Satisfied
4.3 The convenience of using learning support tools (such as WeChat, QQ learning groups, ROM, Tencent conferences, etc.) in Employability diagnostic systems	4.32	1.12	Satisfied
4.4 Use the Employability diagnostic systemsm learning Support Tool to encourage students to think about improving their employability and consider sources of reliability.	4.32	1.13	Satisfied
4.5 Utilize workshop learning activities to encourage students to learn and understand different cultures, and have a positive impact on people from different cultures.	4.30	1.17	Satisfied
Overall average	4.32	1.14	Satisfied

From Table 46, it can be seen that in terms of learning support tools, the overall average satisfaction evaluation for role-play learning and workshop teaching model learning is relatively high (Mean=4.32, S.D.=1.14).

By calculating the average and standard deviation of each item in the learning support tool, it was found that the top three items were as follows: **The first rank** was "Convenient communication for students on the employability diagnosis system platform" with satisfied (Mean=4.34, S.D.=1.14); **The second rank was** "Evaluate the convenience of using learning support tools (such as WeChat, QQ learning groups, ROOM, Tencent Meeting, etc.)", with satisfied (Mean=4.32, S.D.=1.12), and "Use the Employability diagnostic systems learning Support Tool on the employability diagnosis system to encourage students to think about improving their employability and consider sources of reliability, with satisfied (Mean=4.32, S.D.=1.13), both ranking second; **The third rank was** "Students in the Employment Ability Diagnosis System Class", with satisfied (Mean=4.34, S.D.=1.14) and "Using workshop learning activities to encourage students to learn and understand different cultures and have a positive impact on people from different cultures" with satisfied (Mean=4.30, S.D.=1.17).

5. Evaluation

Table 47 The result of satisfaction evaluation on Evaluation aspect

Evaluation Item	Mean	S.D.	The meaning
5. Evaluation aspect (eval)			
5.1 Use games or Q&A, group discussions, and other activities to evaluate the results of extracurricular learning.	4.28	1.20	Satisfied
5.2 The weekly assignments are consistent with the course content	4.30	1.17	Satisfied
5.3 Learning evaluation in the theoretical and practical fields	4.30	1.17	Satisfied
5.4 Conduct employability assessments before and after class	4.30	1.18	Satisfied
Overall average	4.30	1.18	Satisfied

From Table 47, it can be seen that in terms of learning support tools, the overall average satisfaction evaluation for role-play learning and workshop teaching model learning with satisfied (Mean=4.30, S.D.=1.18).

By calculating the average and standard deviation of each item in the learning support tool, it was founded that the top three items were as follows: **The first rank** is "Weekly homework was consistent with course content" with satisfied (Mean=4.30, SD=1.165), and "Learning evaluation in the theoretical and practical fields" with very satisfied, with satisfied (Mean=4.30, S.D.=1.17), and "Employment ability evaluation before and after class" with satisfied (Mean=4.30, S.D.=1.17); **The second rank was** "Using games or Q&A activities to evaluate the results of extracurricular learning" with satisfied (Mean=4.28, S.D.=1.20).

The evaluation results indicate that students were very satisfied with the evaluation of role-play learning and workshop teaching models, which meets the expectations of learners.

The comment and suggestion form students after learning the role-play learning combined with workshop teaching model

The sample learners used a role-play learning with workshop teaching model based on an employability diagnostic system to think about improving their employability through electronic learning, and provided suggestions for improvement. Overall, students expressed high satisfaction with course content, teaching methods, teaching design, teaching feedback, teaching tools, and teaching evaluations. Through course learning, I have gained an understanding of the trends and requirements in the job market, improved my job search skills and strategies, increased my success rate, enhanced my job confidence, and enhanced my competitiveness on the future job search path. The following comments and suggestions are made regarding the use of role-playing learning and workshop teaching models based on employability diagnostic systems:

Learning comments:

Advantage

1.The teaching content was highly practical. By studying this course, not only have you mastered the knowledge of job seeking skills and career planning, but you have also gained a clearer understanding of your career planning and goals. The course content was very rich, covering the entire process of job application, including resume writing, interview preparation, workplace etiquette, and job search skills. Students have learned in the course how to better showcase their strengths and characteristics, as well as how to leave a deep impression on interviewers during interviews. At the same time, the course also taught some practical job search skills, such as how to use online resources, how to effectively communicate with HR, etc. These skills are very helpful for students in their future job search. Especially in the interview skills section, students can continuously improve their communication and adaptability skills in practice.

2.The teaching design is very practical. The course covers all important aspects of job seeking, from how to write an excellent resume, how to perform well in interviews, and how to develop effective career plans. These contents are very practical and can have a positive impact on the career path of students, allowing them to feel the real job seeking environment during the learning process, which is very helpful for students to truly enter the workplace in the future.

3.The organization and arrangement of the course are very reasonable. Each stage has clear goals and time constraints to ensure that students can fully utilize classroom time for learning and practice. The course also includes group activities and role-playing, providing students with opportunities to interact and collaborate with other classmates, improving their communication and teamwork skills. At the same time, the course also invited some successful senior students to share their job seeking experiences, which greatly benefited the students.

4.The teaching method is very flexible. Teachers have adopted various teaching methods, including classroom explanations, case studies, field investigations, group discussions, scenario simulations, role-playing, employment counseling, etc., making the classroom atmosphere both serious and active, allowing students to have a deeper understanding and mastery of these knowledge. Emphasis is placed on practical teaching, especially in simulated interview sessions. Through case analysis, role-playing, and other methods, students can experience the workplace environment firsthand and face future challenges with greater confidence. This provides students with the opportunity to apply theoretical knowledge to practice and improve their practical abilities.

5.The interactivity and participation of the course are very high. Teachers attach great importance to interaction with their classmates, using methods such as simulated interviews and group discussions to help us better understand and master the course content. This interactive learning method not only deepened my understanding of the course content, but also helped me build confidence and learn how to express my opinions and ideas in front of others. Secondly, this course incorporates interactive elements. Role playing, group discussions, and simulated interviews in the classroom provide students with the opportunity to experience and deepen their understanding of knowledge firsthand. Teachers focus on providing timely and positive teaching feedback, providing personalized guidance and advice to students.

6.The curriculum has practicality, rich teaching design, strong interactive teaching activities, and the use of this learning method was also very interesting, improving students' job application skills.

Disadvantage

1.Insufficient practical experience. Although there was a simulated interview section in the course, overall, there are relatively few practical opportunities. It was suggested to increase more practical activities, such as on-site visits to enterprises

and job recommendations for internships, so that students have more opportunities to access the real job market.

2. Insufficient interactive activities. In the classroom, there are not enough opportunities for interaction between students and teachers. It was suggested that teachers can set up more questioning sessions in the classroom to encourage students to actively speak up and improve their participation and learning interest.

3. Insufficient personalized guidance. Everyone has different job seeking needs and confusions, and we hope that the course can provide more targeted personalized guidance. For example, one-on-one consultation sessions can be established to provide students with the opportunity to ask specific questions from teachers.

Learning suggestions

1. Provide more practical experience opportunities. Increase opportunities for practical exercises and simulated interviews, allowing students to have more opportunities to experience and practice, thereby better mastering job search skills.

2. Teaching should be closely linked to reality, based on the specific requirements of current enterprise recruitment, and combined with the common problems of job seekers for simulation exercises, in order to enable students to learn the latest employment knowledge and give them more opportunities to challenge themselves, engage in ability, confidence, and courage competitions.

3. Schools can invite more industry experts and successful individuals to share their experiences with students, strengthen cooperation with enterprises, and provide students with more internship opportunities and career development guidance.

4. Optimize the course structure: It was recommended to arrange the course content in logical order to avoid jumping teaching methods.

5. Increase interactive segments: It was recommended to add more interactive segments in the course, such as group discussions, case studies, etc., to enhance students' interest and participation in learning.

6. Provide detailed feedback: It was recommended that teachers provide detailed feedback after simulated interviews, so that students can understand their strengths and areas for improvement.

7. Extend learning time for complex topics: For important topics such as career planning, courses should be given more time for in-depth learning and discussion. Some exercises and activities in the course may require more time and guidance.

8. The course can provide more personalized support. For example, courses can provide one-on-one career counseling services to help students solve specific problems they encounter during the job search process. In addition, the course can also provide customized learning resources, such as job search guides for specific industries or positions.

Phase IV The results of form confirmation of role-play learning with workshop teaching model, and the employability diagnostic system is used as the foundation for electronic learning to promote employability skills.

The results of role-play learning with workshop teaching model confirmation

Table 48 The result of Overall the model of the role-play learning with workshop teaching model

Item	Mean	S.D.	The Meaning
1. Overall the model.			
1.1 The components of role-play learning with workshop teaching model.	5.00	0.00	Very appropriate
1.2 The process of role-play learning with workshop teaching model.	5.00	0.00	Very appropriate
1.3 The learning activities of role-play learning with workshop teaching model.	5.00	0.00	Very appropriate
1.4 The instruments of role-play learning and workshop teaching model.	5.00	0.00	Very appropriate
1.5 The evaluation of role-play learning with workshop teaching model.	5.00	0.00	Very appropriate
Overall average	5.00	0.00	Very appropriate

From Table48, it can be seen that the overall average of model confirmation for overall with very appropriate (Mean=5.00, S.D.=0.00).

By calculating the average and standard deviation of each item, Overall the model of role-play learning with workshop teaching ,it was found that in every respects the average with very appropriate(Mean=5.00, S.D.=0.00).

Table 49 The result of the components of role-play learning with workshop teaching model

Item	Mean	S.D.	The meaning
2.The components of role-play learning with workshop teaching model	5.00	0.00	Very appropriate
2.1The roles used in the model are comprehensive.	5.00	0.00	Very appropriate
2.2The learning environment of the model can support the improvement of employability skills.	5.00	0.00	Very appropriate
2.3The teaching media used in the model is suitable for the teaching content and characteristics of teaching activities.	5.00	0.00	Very appropriate
2.4Designing learning activities using role-play learning strategies and workshop teaching methods can support employability enhancement.	5.00	0.00	Very appropriate
2.5The teaching process of the mode is complete and appropriate.	5.00	0.00	Very appropriate
2.6The selection of teaching theories should be consistent with the learning content.	5.00	0.00	Very appropriate
2.7Model evaluation testing corresponds to teaching content, teaching process, and teaching objectives.	5.00	0.00	Very appropriate
2.8The feedback section of the model is closely combined with the improvement of employability to arrange learning tasks.	5.00	0.00	Very appropriate
Overall average	5.00	0.00	Very appropriate

From Table49, it can be seen that the overall average of model confirmation for The components of role-play learning with workshop teaching model with very appropriate (Mean=5.00, S.D.=0.00).

By calculating the average and standard deviation of each item in the components of role-play learning with workshop teaching model , it was found that in every aspects the average with very appropriate(Mean=5.00, S.D.=0.00).

Table 50 The result of The processs of the role-play learning with workshop teaching model

Item	Mean	S.D.	The meaning
3.The process of the role-play learning with workshop teaching model	5.00	0.00	Very appropriate
3.1 Process 1: Learn extracurricular content.	5.00	0.00	Very appropriate
3.2 Process 2: Preparing for classroom activities.	5.00	0.00	Very appropriate
3.3 Process 3: Course learning schedule content.	5.00	0.00	Very appropriate
3.4 Process 4: Summary of learning content	5.00	0.00	Very appropriate
3.5 Process 5: Learning effectiveness test	5.00	0.00	Very appropriate
Overall average	5.00	0.00	Very appropriate

From Table50, it can be seen that the overall average of model confirmation for The processs of role-play learning with workshop teaching model with very appropriate (Mean=5.00, S.D.=0.00).

By calculating the average and standard deviation of each item in the processs of role-play learning with workshop teaching model , it was found that in every aspects the average with very appropriate(Mean=5.00, S.D.=0.00).

Table 51 The result of The media of the role-play learning with workshop teaching model

Item	Mean	S.D.	The Meaning
4.The media of the role-play learning and workshop teaching model			
4.1The media used in the model can support role-play learning combined with workshop teaching activities.	5.00	0.00	Very appropriate
4.2The media used in the model is suitable for use in role-play learning combined with workshop teaching model.	5.00	0.00	Very appropriate
4.3The media used in the model can enhance role-play learning activities.	5.00	0.00	Very appropriate
4.4The media used in the model can enhance students' employability skills.	5.00	0.00	Very appropriate
4.5The media used in the model is suitable for practical courses on employability technology.	5.00	0.00	Very appropriate
Overall average	5.00	0.00	Very appropriate

From Table51, it can be seen that the overall average of model confirmation for The media of role-play learning with workshop teaching model with very appropriate (Mean=5.00, S.D=0.00).

By calculating the average and standard deviation of each item in the media of role-play learning with workshop teaching model , it was found that in every respects the average with very appropriate(Mean=5.00, S.D.=0.00).

Table 52 The result of the processs of the role-play learning with workshop teaching model

Item	Mean	S.D.	The Meaning
5.The technology of the role-play learning and workshop teaching model			
5.1The techniques used in the model are suitable for use in role-play learning combined with workshop teaching model.	5.00	0.00	Very appropriate
5.2The techniques used in the model can enhance the effectiveness of learning activities.	5.00	0.00	Very appropriate
5.3The technology used in the model can support the improvement of employability skills.	5.00	0.00	Very appropriate
5.4The technology used in the model is applicable to courses related to employability guidance.	5.00	0.00	Very appropriate
Overall average	5.00	0.00	Very appropriate

From Table 52, it can be seen that the overall average of model confirmation for The technology of role-play learning with workshop teaching model with very appropriate (Mean=5.00, S.D.=0.00).

By calculating the average and standard deviation of each item in the technology of role-play learning with workshop teaching model , it was found that in every respects the average with very appropriate(Mean=5.00, S.D.=0.00).

CHAPTER 5

CONCLUSION AND DISCUSSION

Develop a role-play learning and workshop teaching model by using an employability diagnostic system to enhance the employability of Chinese college students. This study analyzes the impact of role-play learning and workshop teaching models based on employability diagnostic systems on students' employability skills.

The purpose of this study was 1)To study the conditions and requirements of role-play learning with workshop teaching model, by using employability diagnostic system to enhance employability skills 2)To develop a learning model of role-play learning with workshop teaching,by using employability diagnostic system to enhance employability skills 3)To study the effectiveness of using a learning model of role-play learning with workshop teaching, by using employability diagnostic system to enhance employability skills 4)To confirm the learning model form of role-play learning with workshop teaching,by using employability diagnostic system to enhance employability skills .

The study selected a total of 625 students from four majors in the Business Administration Teaching Department of Yunnan University of Finance and Economics, China Vocational College, to participate in the research. According to the Yamane principle, 180 graduates were selected as the sample size for the first phase. According to the specific selection method, 50 experimental group students were selected as the sample sizes for the third phase, and these students voluntarily participated in all studies. Five model experts were selected to participate in the first, second, and fourth phase of the study. According to the specific selection method, including 1 system evaluation expert, 3 model evaluation experts, and 1 employability guidance teaching expert, with at least 5 years of teaching experience and academic achievements in related fields.

The research tools used mainly include:1) Needs assessment questionnaire2) Semi structured interviews3) The evaluation of role-play learning and workshop teaching model 4) Lesson plan; 5) Employment ability test (Pre-test and Post-test) 6) Student satisfaction survey7) Model form confirmation evaluation.

The research is divided into four phases: 1) Studying the conditions and needs of role-play learning and workshop teaching model, using an employability diagnostic system as the basis for electronic learning to enhance employability skills 2) Develop a role-play learning and workshop teaching model, using an employability diagnostic system as the foundation for e-learning to enhance employability skills3) Study the effectiveness of using role-play learning and workshop teaching models, and use employability diagnosis systems as the foundation for e-learning to enhance employability skills4) Confirm the form of role-play learning and workshop teaching model, and use the employability diagnostic system as the foundation for e-learning to enhance employability skills;

Conclusion

A needs assessment questionnaire survey was conducted on 150 undergraduate graduates to understand the current situation and problems of their employability skill; Collect the components and processes of model development through semi-structured interviews with 5 model experts; The effectiveness of model learning was verified through employability tests and student satisfaction survey before and after learning using the model draft;Conduct model authentication by confirming and evaluating the form of the model.The conclusion of the four phases of research was as follows:

Phasel:Study the learning model conditions and requirements of role-play learning with workshop teaching,by using employability diagnostic system to enhance employability skills .

From the general information results of students, it can be seen that the majority of students lack job interview experience, and more than half of them have reported not being exposed to role-play learning and workshop teaching models, as

well as lacking knowledge or training related to simulated interviews in the past. From this, it can be seen that current undergraduate students who are about to graduate need to increase their job interview experience and learn job application skills through new teaching model, such as strengthening training in simulated interviews and preparing in advance for entering the workplace.

From the survey results on the availability of electronic information technology among students, it can be seen that the students participating in the questionnaire survey have basically mastered a certain level of information technology, but their actual ability to master information technology was not high. Students hope to learn through electronic information technology, have a higher level of information technology, and proficiently use various system platforms to improve learning efficiency. The questionnaire response situation meets the expectations of the researchers.

From the survey results of students' actual and expected abilities in using the employability diagnosis system, it can be seen that students have high expectations for the functionality of the employability diagnosis system. For example, students have a high demand for downloading test reports through the system and selecting corresponding employment guidance based on the system diversion label. They hope to view the employability diagnosis diversion label in the system and the employability test results in the system. Students also have high expectations for the effectiveness of the employability diagnosis system, and they hope to support the improvement of employability through systematic learning. This indicates that students have a relatively high overall evaluation of various aspects of the employability diagnostic system, and they hope to improve their employability by assisting in the use of the employability diagnostic system.

From the survey results of students' opinions on the actual and expected conditions of model development, it can be seen that students have a high demand for roles. For example, they expect to explore themes through group learning, expect teachers to show empathy and praise, and expect learning group division to consider individual differences; Students have high expectations for the demand for learning

activities. From this, it can be seen that students attach great importance to role positioning, teaching interaction, and learning activities. Students hope to improve their employability through role-play learning and workshop teaching models. Students hope to improve learning efficiency through scientific grouping activities, which meets the expectations of researchers.

Through interviews with five model experts, the experts' suggestions comprised eight components:

1) Roles. Regarding the roles of teacher, they should improve themselves in terms of learning strategy design, technology skills, and learning to be the facilitator when using online teaching. Regarding the students' roles, they should participate, practice by themselves, and manage their time to be successful.

2) Teaching environment. The learning environments consisted of a learning support system which provided content that was related to career needs; this system should provide an evaluation and feedback function to students and should have a screen that shows students which skills should be improved. For learning activities, the teacher should provide various practice activities so that students can get experience in future career development.

3) Teaching media. Diverse teaching media technologies should be used to assist in the presentation of teaching content. At the same time, the system should be convenient, user-friendly, diverse and flexible, equipped with a learning assistant to guide students in their learning progress and let them know which areas of skills need improvement. A recommendation system with various types of learning and a diverse question-answering system should be provided so that students can learn through system data analysis.

4) Teaching activities. In terms of activities and evaluations, it is necessary to design rich and interesting skills-training activities that can stimulate students' interest in learning and cultivate true professional skills. Activities that promote the knowledge and skills required for practical work and meet the employment needs of

employers should be created, allowing students to take action together. Case studies should be provided to encourage students to creatively solve problems.

5) Teaching process. The learning process, role-play and workshop teaching should be clear and comprehensive. According to the teaching objectives and content of the teaching stage, the stage of using the employment ability diagnosis system should be flexibly determined to assist teaching. The learning process should include a) preschool guidance; b) theme selection and design; c) learning process detection; d) learning and practice; and e) post-learning guidance.

6) Teaching strategies. Clarification, understanding, and demonstration should be conducted before implementing design patterns to enhance monitoring and evaluation. To clarify goals, themes should be explained, tasks should be broken down, and teachers should guide students throughout the process, actively answering students' questions, analyzing responses and providing feedback (opinions) after learning. Teaching plans should be designed using a blended learning approach, integrating components and programs of an e-learning-based employability diagnostic system as well as role-play learning and workshop teaching strategies.

7) Evaluation testing. The system should be able to provide each student with a test and a personal diagnostic report. Teachers should be able to view the student evaluation situation in the background, view the student's employment situation, produce employability diagnostic diversion labels, and download student reports.

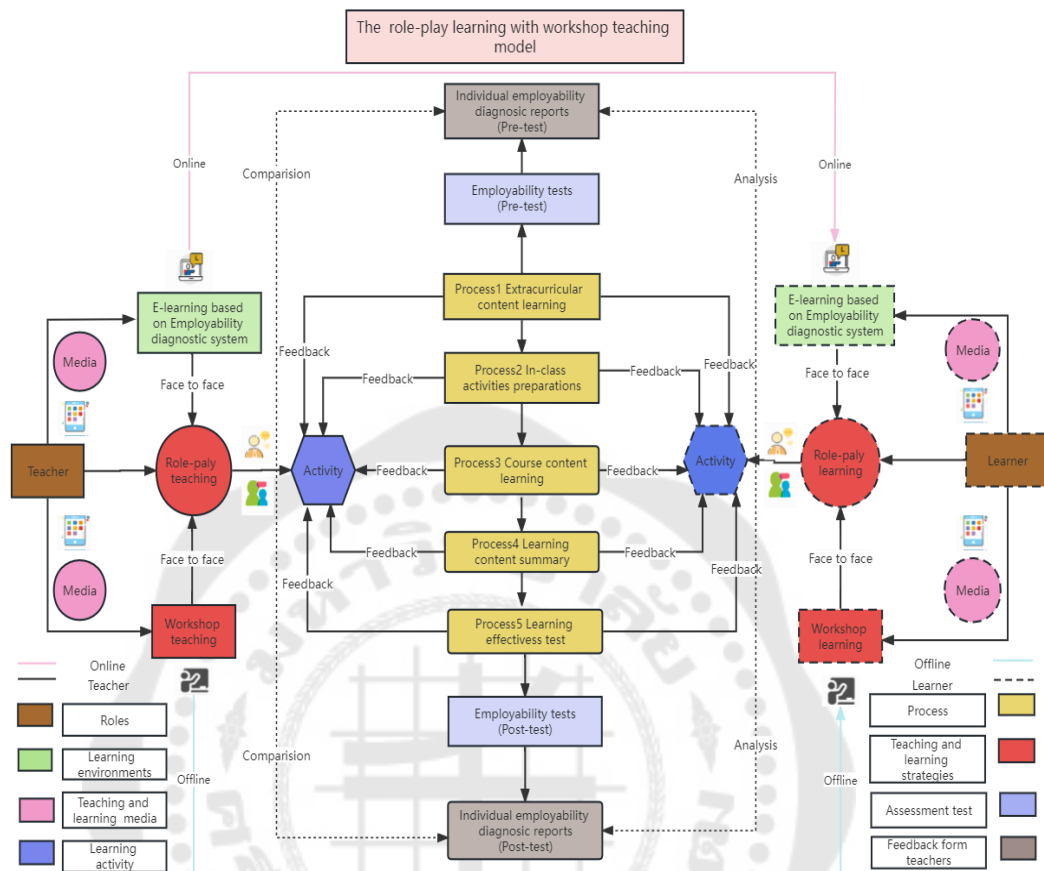
8) Feedback. The system should be able to guide learning progress and keep up with students' learning progress in a timely manner. The system should be able to respond or provide feedback to students. During the learning process, the system should display the evaluation progress and provide improvement feedback. Feedback should be provided through teacher and student evaluations, both online and offline. Based on this, a role-play learning and workshop teaching model was proposed.

Summary of Phase I Research

Based on the employability diagnosis system as the foundation of e-learning, develop a role-play and workshop teaching model to promote employability skills. Based on the findings of the first phase of research mentioned above, the needs of students were: 1) Looking forward to improving the level and efficiency of the use of electronic information technology; 2) Looking forward to enhancing employability through role-play learning activities; 3) Looking forward to teachers organizing rich workshops and group learning activities to enhance student's employability skill. Overall, students look forward to using the role-play learning and workshop teaching models of the employability diagnosis system based on electronic learning for learning. Existing conditions: 1) Students have a certain foundation in electronic learning; 2) Employment ability diagnosis system based on e-learning; 3) Students have a high overall evaluation of the system's functionality, effectiveness, and other aspects, and hope to enhance their employability through systematic learning.

Phase II: Develop a role-play learning with workshop teaching model, by using employability diagnostic system to enhance employability skills .

Based on the first phase needs assessment survey questionnaire, it has learned about the current situation and existing problems of students' employability skill. So need to develop a role-play learning and workshop teaching model to improve students' employability skill. Based on the results of semi-structured interviews, it has obtained the components and processes of the model. After the researchers presented the draft model to experts for evaluation, they also agreed that the role-play learning and workshop teaching models should include the eight components mentioned above, and all eight aspects are optimal and very suitable, meeting quality requirements. The model diagram is shown below:



Figures 25 The form of role-play learning with workshop teaching model

The study obtained the components and processes of role-play learning and workshop teaching models from questionnaire surveys and expert interviews conducted on students. As shown in Figure 5, Researchers propose that role-play and workshop teaching models should be composed of eight components: 1) Roles 2) Learning environment 3) Learning media (such as online learning systems, online learning resources, submission tools, collaboration tools, social network applications, communication tools, and evaluation tools) 4) Learning activities 5) Teaching processes 6) Learning strategies 7) Evaluation tests 8) feedback. This model has five processes: 1) Learning extracurricular content (online) 2) Preparing for classroom activities (online and offline) 3) Learning course content (online) 4) Summarizing learning content (offline)

5) Learning effectiveness testing (offline). According to the evaluation results of five model experts, all eight components and five processes are very suitable and meet the quality requirements.

The components of role-play learning with workshop teaching model, by using the employability diagnostic system as the foundation for e-learning, promote students employability skill. The specific situation of the eight components was as follows:

Firstly, Role.

Learner role: Before conducting classroom teaching activities, learners must be responsible for the learning content, have a passion for learning, and must listen, express, and jointly decide the best way to solve problems.

Teaching Role: The teacher was responsible for arranging learning resources and planning extracurricular activities, creating interesting classroom workshops, encouraging students to participate in both in and out of class activities, and tracking and controlling their activities. Receive feedback and allow students to express themselves freely in class, avoiding raising sensitive cultural issues, which may lead to conflicts for students.

Secondly, Learning environment.

It provides a learning environment suitable for enhancing employability and learning, including tools, supporting equipment, technical preparation, and an internet network that learners can use anytime, anywhere. Created a learning atmosphere suitable for enhancing employability, including creating a lively classroom atmosphere and engaging extracurricular activities. Through teaching, students were given the opportunity to express their opinions, engage in free discussions, encourage them to put forward their own opinions, and learn knowledge from other classmates.

Thirdly, Learning media. Use diverse teaching media to organize teaching activities at each process, including the following 13 types:

1) Employment ability diagnostic system; 2) Computer 3) Mobile phone; 4) IPAD; 5) PPT; 6) Video; 7) Sound; 8) Pictures; 9) Colorful pens; 10) White

paper; 11) WeChat and QQ learning groups; 12) Employability Enhancement Workshop Group; 13) Test table.

1. Online learning resources include Rain Classroom, Employability Diagnosis System etc. In this study, researchers selected online learning resources for the employability diagnosis system. This will be used to organize the first phase of teaching activities.

2. Submission tools (molds) include QQ, WeChat, employability diagnosis system, Rain Classroom, etc. In this study, researchers chose QQ, WeChat, and employability diagnostic systems because learners were already familiar with and able to fully and effectively use them. These teaching media tools will be used for teaching activities in the second, third, fourth, and fifth stages.

3. Online learning systems include content management systems and learning management systems. This will be the main system for conducting teaching activities both inside and outside the classroom. Researchers choose to use an employability diagnostic system that aligns with the model. This was a content and learning management learning system that can support the use of learning tools such as QQ, WeChat, mobile phones, computers, and iPads. For system administrators, teaching staff, and learners, it was very convenient to use and does not require high-level programming knowledge to develop the system and save system maintenance costs. It will be used to organize teaching activities for steps 1 and 2.

4. Social network applications include QQ, WeChat, Weibo, etc. In this study, the researchers mainly focused on QQ and WeChat. According to the first stage of the situation and needs survey results, the majority of respondents have an intermediate level of information technology mastery (It can use information technology for communication and learning, such as online learning, learning, creating and sharing or publishing information, such as creating and creating online learning media, applications, or web development). QQ and WeChat are popular applications that were easy to access and support chat and collaboration. This will be used to organize teaching activities in the fourth and fifth stages.

5. Collaboration tools include 1) PPT2) Video 3) Sound 4) Images 5) Cards 6) White paper 7) colored pens, etc. In the third stage of organizing research activities, researchers all chose 1) PPT2) Video 3) Sound 4) Pictures 5) Cards 6) White paper 7) Colored pens to organize role-play learning and workshop teaching mode learning activities, as this was an appropriate tool that aligns with role-play and workshop learning activities.

7. Communication tools include Wechat,QQand more. Researchers have chosen to establish 5 employability improvement workshop groups as they can establish a communication platform to carry out employment consultation activities in groups, which was convenient and simple, and effectively supports learning both inside and outside the classroom. This will be used for teaching activities in the fourth and fifth stages.

8. Assessment tools for learners include: Rain Classroom, School Online, Employment Ability Diagnosis System, Test Tables, Offers, etc. In this study, researchers chose a test table as the evaluation tool. This enables teachers to evaluate their learning outcomes in real-time and create an interesting and exciting atmosphere for their classroom to attract their attention. This will be used to organize the fifth process of teaching activities.

Fourthly, learning activities

The workshop employment consultation activity and role-play scenario simulation practice activity will be used for the third process of learning activities. Which use the method of online and offline.

Fifth, Teaching Process

The researchers set up a total of 5 teaching processes: 1) Learning extracurricular content (Online) 2) Preparing for classroom activities (Online and offline) 3) Learning course content (Online) 4) Summarizing learning content (Offline) 5) Learning effectiveness testing (Offline).

Sixth, Learning Strategies

The researchers selected role-play learning and workshop teaching strategies that are compatible with employability; Conduct research through a role-play and workshop teaching model. The role-play learning strategy was based on social role theory, while the workshop teaching strategy was based on social cognitive career theory.

Seventh, Evaluation

In order to test the learning effectiveness of the weekly course content, corresponding quizzes and assignments are provided every week. Mainly carried out in the fifth process.

Eighth, Feedback

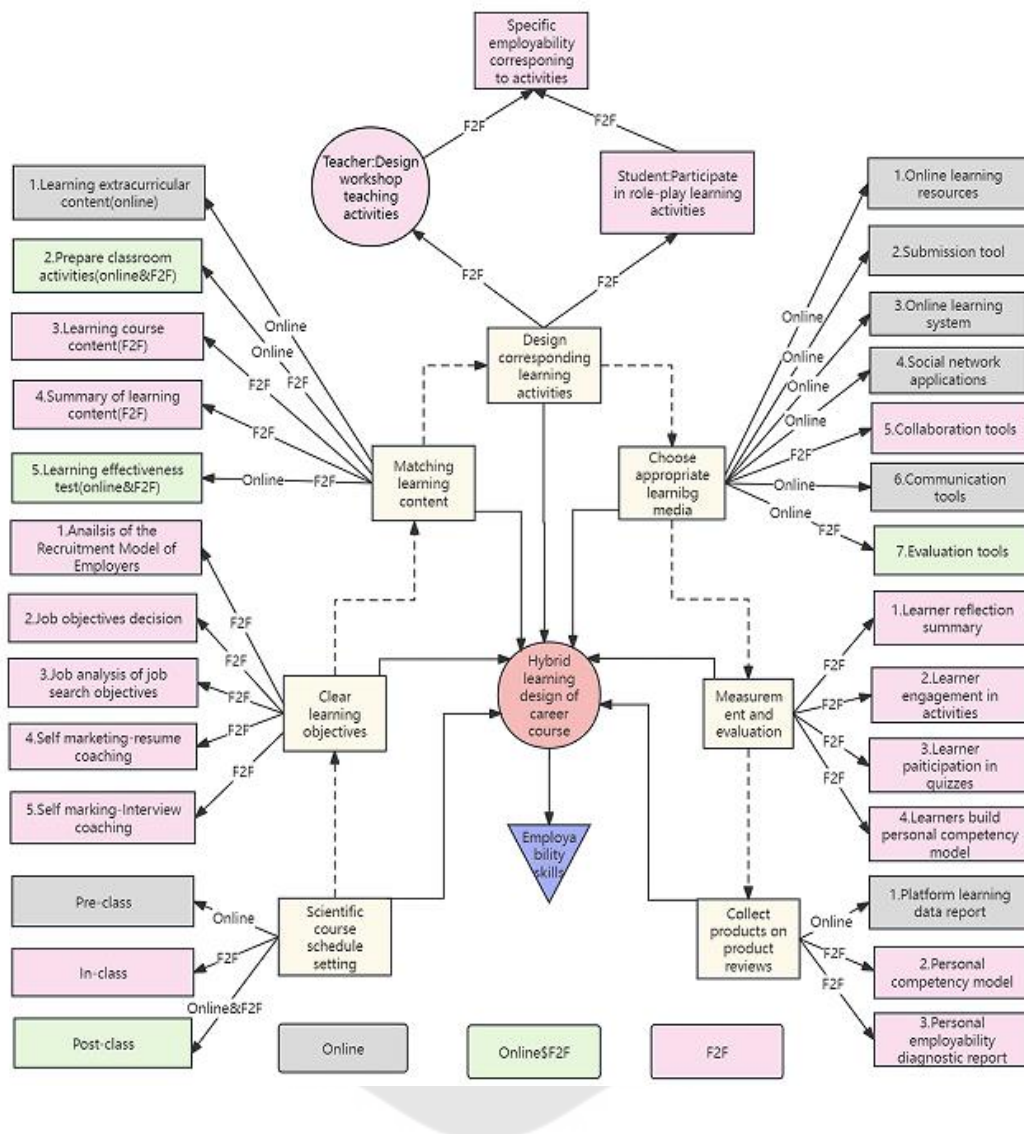
Every week, there was a two-way summary and reflection interaction between teaching staff and students, mainly carried out in the fourth process, contain online and offline.

The process of role-play learning and workshop teaching models, by using an employability diagnostic system as the foundation for e-learning, promotes employability in five processes as follows:

- 1) Process 1: Learn extracurricular content. (Online)
- 2) Process 2: Prepare for classroom activities. (Online&Offline)
- 3) Process 3: Learning course content (Online&Offline)
- 4) Process 4: Summary of Learning Content (Offline)
- 5) Process 5: Learning Effectiveness Test(Online&Offline)

On this basis, researchers will apply their research findings to the development of role-play learning and workshop teaching models, and use employability diagnosis systems as the foundation for e-learning to promote employability enhancement thinking in the third phase.

The organizational process of the lesson plan is as follows:



Figures 26 The hybrid lesson plan of role-play learning with workshop teaching model

Process1: Learn extracurricular content. (Online)

Teaching staff:

- 1) After explaining the course schedule to the students, they are required to log in to the system and engage in weekly online learning activities.
- 2) Arrange online learning resources in advance through the employability diagnosis system platform based on the weekly content and learning objectives.

3) Release learning task notifications in advance through the employability diagnosis system platform platform.

Learners:

1) Online learning materials (Online learning). Online learning resources released by online learning instructors in the employability diagnosis system.

2) Write a review diary. After studying materials every week, students summarize and reflect on the knowledge gained from the research materials before classroom activities

3) Receive task notifications through the employability diagnostic system.

Process2: Prepare for classroom activities. (Online&Offline)

During this process, questions will be discussed, students will be asked about their usage, their learning content will be reviewed, extracurricular activities will be conducted, and online learning knowledge will be rewarded to enhance the answers of the winners or participants.

Teaching staff: Prepare questions in the courseware of the employability diagnosis system platform. Learner: Prepare your smartphone and access the employability diagnosis system platform

Process3: Learning course content (Offline)

The use of role-play learning and workshop teaching modes provides interesting content.

Teaching staff (Workshop practice activities) work together to find various problem-solving methods; Course members can ask questions, express opinions, and participate in evaluations and propose solutions together.

Learners (Role-play practice activities) jointly comment and choose the best solution;

Process 4: Summary of learning content (Online&Offline)

Teaching staff: Summarize the learning content for this week.

Learner: Reflect on the learning content of this week.

Course members can ask questions, express opinions, and participate in evaluations and propose solutions together.

Process5: Learning Effectiveness Test (Online&Offline)

Small test. Provide solutions.

Based on the research results of the second phase lesson plan mentioned above, it can be seen that the role-play learning and workshop lesson plan developed in this study is complete, with teaching objectives and content corresponding to the research objectives. The teaching process logic was clear and easy to understand, and the design of learning activities is closely combined with employment ability improvement practices. It has pre and post learning evaluation feedback, and weekly teaching plans include action roadmap and learning resources. The research results shows that 12 accompanying quizzes were all optimal and have been unanimously recognized by experts. And for the model, the researcher use abbreviate for RoPL-WEST Model.

Summary of research in the second phase

Based on the research findings of the second phase mentioned above, the role-play learning with workshop teaching model proposed in this study has complete and logical components that were clear and understandable, corresponding to the research objectives, and suitable for this research project. It has an action roadmap and learning resources, and all eight components and five processes are optimal. With the unanimous consent of experts, it can be used in the experimental research of the third stage in conjunction with the lesson plan.

PhaseIII: Study the effectiveness of role-play learning with workshop teaching model, by using employability diagnostic system to enhance employability skills.

Conclusion of research on employability test

The result of employability test after students learned from the role-play learning with workshop teaching model, they had higher employability test results in eight aspects: Employment intention, goal identification, job analysis, human capital

confidence, job opportunity exploration, job performance, monitoring and regulation, and job efficacy than before learning. This indicates that the role-play learning and workshop teaching models based on the employability diagnosis system are effective, and students have significantly higher employability after using role-playing learning and workshop teaching models than before learning.

Conclusion of research on the correlation between eight aspects of employability testing before and after testing

The correlation between eight aspects of employability skills, it founded that after students learned from the role-play learning with workshop teaching model, students show a positive correlation in their employability test results in eight aspects: employment intention, goal identification, job analysis, human capital confidence, job opportunity exploration, job performance, monitoring and regulation, and job efficacy. This indicates that the role-play learning and workshop teaching model based on the employability diagnosis system was appropriate. The eight aspects promote and interact with each other, jointly promoting the improvement of students' employability skill.

Conclusion of Student Satisfaction survey

The result of Student Satisfaction after students learned from the role-play learning with workshop teaching model, it founded that the evaluation results are based on the role-play learning and workshop teaching models of the employability diagnostic system, and learning satisfaction, based on electronic learning. In order to promote students' employability, the overall satisfaction of 50 experimental subjects with role-playing learning and workshop teaching models was high, with an average level of (Mean=4.30, SD=1.290), indicating overall satisfaction. The average level of learners and teaching staff was (Mean=4.25, SD=1.1166), the average level of the process of organizing teaching activities was (Mean=4.28, SD=1.138), the average level of the learning environment is (Mean=4.34, SD=1.830), and the average level of learning support tools is (Mean=4.32, SD=1.136). It can be seen that the evaluation of learning satisfaction in five aspects was very high. In addition, sample learners used role-playing

learning and workshop teaching models based on employability diagnostic systems to think about enhancing employability through electronic learning, providing suggestions for improvement.

Summary of research in the third phase

Based on the research in the third stage mentioned above, it was found that the role-play learning and workshop teaching model proposed in this study was effective. The eight aspects of employability testing were positively correlated, and students were very satisfied with the role-play learning and workshop teaching models. Model experts can confirm the model form again before promoting its use.

PhaseIV: Confirm the form of role-play learning with workshop teaching model,by using employability diagnostic system to enhance employability skills .

Conclusion of Research on Model Formal Confirmation and Evaluation

After implemented in phaselll.founded that the overall of the model is very appropriate in every components、 processes 、 learning activities 、 instruments,and evaluation (Mean=5.00,S.D.=0.00). The evaluation results indicate that the quality of the model-based learning system, including all aspects, it was very suitable and meets the quality requirements.

Summary of fourth phase of research

From the research results of the fourth phase, it can be seen that experts have evaluated the form of role-play learning and workshop teaching models based on the employability diagnostic system, with an overall average level of high suitability.The model components, processes, technology, media, and overall evaluation are all very suitable and meet the quality requirements, which can be promoted and used.

Conclusion drawn

The role-play learning and workshop teaching model proposed in this study is effective.The test scores of students before using the model are significantly higher than those after learning.The eight aspects of employability testing are positively correlated, which can provide strong learning support and guidance for students' employability.Students have a high level of satisfaction with role-play learning and workshop teaching models, and indicate that they can improve their competitiveness on

the future job search path through course learning. Students have a high level of participation in a blended learning environment based on digitalization and contextualization, indicating that through course learning, they have gained an understanding of the trends and requirements in the job market, improved their job seeking skills and strategies, increased their success rate, enhanced their job seeking confidence, and achieved significant learning outcomes. Approved by model experts, it can be used as a typical promotion for career guidance course design.

Solved problems

The role-play learning and workshop teaching models proposed in the study can support the improvement of employability skill and solve the problems of lack of practice and single form in traditional employment guidance courses. Based on the literature review related to the previous research topic, this study innovatively proposes eight factors that affect the success of student employment (employment intention, goal identification, job analysis, human capital confidence, opportunity mining, job performance, monitoring and regulation, and job efficacy), targeting the key to weak employment ability of students. Targeted improvement is achieved through a combination of digital and situational role-playing learning and workshop teaching design;

Innovation and highlights

The role-play learning and workshop teaching model proposed in this study was based on group units, integrating scenario-based, experiential, and interactive role-play learning and workshop teaching, as well as an employment ability diagnostic system based on e-learning, throughout the entire teaching process before, during, and after class. A hybrid flipped-classroom teaching approach of "online and offline" learning was implemented. Based on the above research results (Figure 5), it could be concluded that the role-play learning and workshop teaching model proposed in this study was different from traditional teaching models because this model had the following five highlights and five innovations:

Five highlights of the role-play and workshop teaching model:

- 1) Model development was rooted in students' actual needs and existing conditions, reflecting a demand-, problem-, and goal-oriented approach.
- 2) The model reflects the flexible conversion between online and offline learning.
- 3) The model demonstrates a clever combination of theory and practice.
- 4) The model highlights the current trends of electronic, situational, experiential, and interactive concepts in research.
- 5) The model components are interconnected, closely connected, complementary, integrated, and work together to produce effects.

Five innovative points of the role-play and workshop teaching model:

- 1) The model has a supporting lesson plan for blended learning.
- 2) Current research trends are innovatively integrated into the model.
- 3) Models for comparative analysis are scientifically set up before and after learning.
- 4) The model's learning activities run through every teaching process.
- 5) The role-play learning strategy and workshop teaching theory selected by the model are consistent with the theme of employability skills.

Scientific significance

From the research results, it can be seen that this study is based on a controlled, objective, and replicable measurement method, with strong reliability. It is based on objective standards such as academic performance, job seeking practice, and job seeking feedback; This study not only focuses on the employability of fresh graduates, but also on their ability to continue developing after graduation; This study focuses on observing how employability arises through the use of role-playing learning and workshop teaching models, and provides observations and explanations.

Application value

The role-play learning and workshop teaching models proposed in this study have innovated in teaching design. Theoretical knowledge will be designed through the employment ability diagnosis system platform, and practical application will mainly be designed through role-playing and workshop ideas. Based on the development of the employment ability diagnosis system, the role-playing learning and workshop teaching models are mainly used to enhance practical effectiveness testing, enable students to engage in experiential, situational, and interactive learning, consolidate theoretical learning effects, enhance professional training, and improve their employment ability. Learning models can more accurately match students' choices of real social work departments and job positions, and have application value in guiding students towards targeted employment and improving the quality of their employment.

Discussion

Discussion follow by the research objective.

Phase I: To study the conditions and requirements of role-play learning with workshop teaching model, by using employability diagnostic system to enhance employability skills

Discussion on the research results of the needs questionnaire, divided into four parts

In this section, our research questions are compared and the research results are discussed one by one with regard to the functions, characteristics, significance, and other aspects of the development of the teaching model in the order of research objectives.

Discussion on the research results of the needs questionnaire, divided into four parts

Part 1: Discussion on the Basic Information of Questionnaire Respondents and Survey Results

The proposal of the teaching model was based on problem-oriented thinking. The research focused on empirical research and empirical analysis,

selecting some groups facing employment difficulties for key research, and conducting needs questionnaires on students' previous knowledge and experience to accumulate first-hand information. Emphasis was placed on using empirical thinking to solve practical employment problems, guided by practical problems, conducting empirical research that combined teaching and work, and paying attention to the common problem of "insufficient employment competitiveness" among college students. As shown in the questionnaire results (Figure 3), the respondents were all graduating junior students. Most students lacked job interview experience, and more than half of the students reported not being exposed to role-play learning and workshop teaching modes, and lacking knowledge or training related to simulated interviews. From this, it can be seen that current junior students who are about to graduate need to increase their job interview experience, which is consistent with the proposal of Lowell, V.L. and Alshammari, A. (2019), who state that role-play simulations can provide students with experiential learning opportunities to develop strong interview and diagnostic skills as well as practice the skills they learn in the classroom. Students urgently need to improve their job application skills through new teaching methods, such as training in simulated interviews, and preparing in advance for entering the workplace. This can be linked to the explanation proposed by Wang, YH (2020), who states, "Participating in role-play activities attracts students' learning attention and helps them learn in a more enjoyable way." Therefore, the teaching model adopts problem-oriented thinking.

Part 2: Discussion on the Results of the Survey on the Ability of Students to Use Electronic Information Technology

The proposal of the teaching model was based on e-learning thinking. This study utilizes an e-learning environment to promote the competitiveness of college students in employment and explores how to use technology to support the effectiveness of learning. As for the availability of information technology among students, the research results present the following expectations: 1) Students expect to master high-level information technology; they are very eager to master high-level information technology, so the needs ranking was high, indicating that students expect

to learn through electronic information technology. This is consistent with the research findings of Kudratdeep Aulakh et al.,(2023),who state that educational institutions around the world are striving to enhance their e-learning teaching mechanisms to meet the widespread desire of today's students to use electronic technology tools for learning; 2) Students expect to improve their ability to use electronic technology; there is a high demand for using novel and diverse network applications, which indicates that they have a high expectation for innovative electronic learning. This is consistent with the viewpoint proposed by Sotiriou et.al.,(2020),who state, "E-learning provides students with the opportunity to use various innovative electronic educational tools"; 3) Students expect to be proficient in using various system platforms to improve learning efficiency, and there is a high demand for proficiency in using various school system platforms for learning. Students recognize the quality of learning services provided by the existing employability diagnostic system, and the functions and services provided by the employability diagnostic system are suitable for the learning characteristics of students. From this, it can be seen that the quality of e-learning systems is the most important dimension of overall electronic learning service quality. The overall quality of e-learning services will affect the satisfaction of students learning electronically, thus affecting the improvement of student loyalty (Long Pham, Yam B. Limbu, Trung K. Bui, Hien T. Nguyen & Huong T. Pham, 2019). Therefore, the teaching model embodies e-learning thinking.

Part 3: Discussion on the survey results of students' actual and expected abilities in using the employability diagnostic system

The proposal of the teaching model was based on personalized-learning thinking. Based on the employability diagnostic system model (Luo et al.,2023),this study utilizes existing employability diagnostic systems (Figure4) to diagnose problems with student employment ability. As for the actual and expected abilities of using the employability diagnostic system, the research results show the following: 1) Students pay more attention to the functions of the employability diagnostic system. For example, students gave higher rankings to downloading test reports

through the system and selecting corresponding employment guidance needs based on system diversion tags, indicating that students expect personalized learning feedback provided by the employability diagnostic system. This is consistent with the viewpoint proposed by Cardenas et al.(2021),who state, "Teachers can provide feedback on the learning progress provided by the learning management system for both teachers and students";2)Students pay more attention to the service of the employability diagnostic system, and the high demand for the system to be equipped with teaching assistants to assist in answering questions indicates that students pay attention to communication and interaction with teachers in the system, which is consistent with the idea proposed by Kabir et al. (2022),who state, "Communication should be emphasized in the learning management system"; 3) Students also have high expectations for the effectiveness of the employability diagnostic system. As expected, the high ranking of the system's learning support for job seeking and application abilities indicates that students crave personalized learning systems to assist in improving their employability. This is consistent with Cardenas et al.(2021), who suggest "utilizing various learning resources to create educational experiences and adapt the teaching process to students' specific knowledge and needs". This indicates that students have high expectations for the functionality, services, and effectiveness of the employability diagnostic system. Therefore, the teaching model embodies personalized-learning thinking.

Part 4: Discussion of the survey results of students' views on the actual and expected conditions of model development

The proposal of the teaching model was based on goal-oriented thinking. Based on the research trends summarized by previous researchers, a fusion innovation was proposed to construct a role-play learning and workshop teaching model based on electronic and situational learning.As for the views on the actual and expected conditions of model development, the research found the following:1) Students have a relatively high demand for roles; this can be seen through the high demand for "scientific division of learning groups",indicating that students expect to explore themes through group learning, which is consistent with the research results of "group counseling"

proposed by Liu (2022) and Wang (2018);2) Students have high expectations for learning activities; this can be seen through the high ranking of "Organizing teaching activities can enable students to learn the practice of improving employability"; and "Establishing a connection between teaching activities improves employability skills"; which is consistent with the research results of Hui, Y.K., Kwok, L.F., & Ip, H.H.S.(2021),who state, "Teachers and students can plan their ability development based on the demand of the job market";3) Students have a high demand for flexible access to learning materials through electronic devices, which is consistent with the research findings of Johnson et al.(2021),who explore "using electronic devices at different times and locations";4)The high ranking of students regarding the need for weekly teaching evaluations indicates that they focus on timely verification of learning outcomes, which is consistent with the "testing before and after learning" proposed by Cardenas et al.(2021); 5) Students expect to enhance their employability through the system and achieve practical results. For example, the demand for promoting employability through system testing ranks relatively high, which is consistent with the approach proposed by Cardenas et al. (2021), who state, "Diagnostic tests should be conducted before students engage in model learning to understand low scoring projects and identify areas that need to be strengthened." Therefore, the teaching model embodies goal-oriented thinking.

Discussion on the research results of the semi-structured interviews

The proposal of the teaching model was based on demand-oriented thinking. The researchers conducted preliminary research on the conditions and needs of students for model development, as well as the current situation, and suggestions of experts on model development were sought before considering how to develop the teaching model. From the results of the semi-structured interview research in Phase I, it can be seen that the experts believed that the current trends in using e-learning technology for learning management were 1) online learning (gamification); 2) blended learning (online and offline); 3) learning recommendation system (diversified); 4) ability to provide feedback to teachers; and 5) learning management based on big data. The

experts also suggested that the teaching model should include 1) roles; 2) learning media; 3) learning environment; 4) learning strategies; 5) learning processes; 6) learning activities; 7) evaluation; and 8) feedback and other elements; it was also recommended that designers consider the risk factors of the model, which may result in the model not being executed according to the plan, and develop a contingency plan in advance. The interview results were consistent with the teaching model proposed in this study. This can be linked to the research conducted by Parkes, M., Reading, C., & Stein, S. (2013) on the abilities required for effective performance in university e-learning environments. It was found that the system-supporting abilities consisted of a learning environment on the website and the function of helping instructors manage courses, and the content should have interactive content with learning activities. Therefore, the teaching model embodies a demand-oriented research mindset.

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Discussion on the research results of the components and processes of the model

The proposal of the teaching model was based on precision-learning thinking. All components of the entire teaching model were interconnected, closely connected, complementary, integrated, and effective together. The role-play learning and workshop teaching model consisted of eight main components: 1) roles; 2) learning activities; 3) learning environment; 4) teaching (learning) strategies; 5) teaching process; 6) teaching (learning) media; 7) feedback; and 8) assessment tests, and they were all optimal. They were similar to the components proposed by Cardenas et al. (2021), which included "learning paths, specific learning processes, learning support tools, course components, digital learning resources, learning platform navigation trees, professor feedback, and assessment (quizzes)". The interview results were consistent with those of the five model experts in the first phase. It is particularly important to emphasize that the teaching objectives and content of the model correspond to the research objectives. This is consistent with Barthakur et al. (2022), who emphasize, "Carefully designed online courses can enhance the learning experience, effectively developing learners' skills and knowledge. A key factor in designing online courses in higher education environments is clear learning objectives consistent with course evaluation and learning activities." Therefore, the teaching model embodies precise thinking.

The proposal of teaching models was based on experiential teaching practices. Through workshops for employment consultation and the use of role-play learning strategies for job applications and other practical activities, the aim was to provide opportunities for students through gamified and fun-based scenarios in order to promote the familiarity of college graduates with the job market and help them gain a

positive professional experience during the school transition period. There were five processes involved in the role-play and workshop teaching model: 1) learning extracurricular content (online); 2) preparation for learning activities (online and offline); 3) learning course content (offline); 4) learning feedback (offline); and 5) learning assessment (offline). The teaching process has clear and easy-to-understand logic, and the design of learning activities is closely integrated with practical employment ability improvement. It has pre- and post-learning evaluation feedback. This can be linked to a study of Müller, C., Mildenerger, T. & Steingruber, D. (2023), who pointed out, "When implementing flexible learning plans in blended learning design, special attention should be paid to the following educational design principles: providing students with appropriate course structure and guidance, activating learning tasks, stimulating teacher interaction and socialization, and timely feedback on the learning process and results." The teaching model mainly includes workshop activities organized by teachers. Harth & Panke (2019) pointed out that one particularly interesting role of a workshop was that of aspiring teachers. It also includes student participation in role-play activities and learning in small groups, which is consistent with the research findings of Blomberg et al. (2020), who state, "Participants found role-play to be very valuable." Teaching activities are designed with the aim of directly enhancing students' employability, which is consistent with the measures taken by Kent et al. (2023) to incorporate student counseling into experiential courses. This also can be related to the proposal of Hui, Y.K., Kwok, L.F., & Ip, H.H.S. (2021), who state, "Consultants and students can better plan their ability development based on the job market." Therefore, the teaching model embodies experiential learning thinking.

Phase II To develop a learning model of role-play learning with workshop teaching, by using employability diagnostic system to enhance employability skills

Discussion on the research results of the second phase

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appropriate course structure and guidance, activating learning tasks, stimulating teacher interaction and socialization, and timely feedback on the learning process and results." The teaching model mainly includes workshop activities organized by teachers. Harth & Panke (2019) pointed out that one particularly interesting role of a workshop was that of aspiring teachers. It also includes student participation in role-play activities and learning in small groups, which is consistent with the research findings of Blomberg et al. (2020), who state, "Participants found role-play to be very valuable." Teaching activities are designed with the aim of directly enhancing students' employability, which is consistent with the measures taken by Kent et al. (2023) to incorporate student counseling into experiential courses. This also can be related to the proposal of Hui, Y.K., Kwok, L.F., & Ip, H.H.S. (2021), who state, "Consultants and students can better plan their ability development based on the job market." Therefore, the teaching model embodies experiential learning thinking. Phase III To study the effectiveness of using a learning model of role-play learning with workshop teaching, by using employability diagnostic system to enhance employability skills

Discussion on the Research Results of Employability Testing for Students Before and After Using Model Learning

After using role-playing learning and workshop teaching models, students showed higher employment ability test results in eight aspects: employment intention, goal identification, job analysis, human capital confidence, job opportunity exploration, job performance, monitoring and regulation, and job efficacy than before learning. This indicates that the role-play learning and workshop teaching model based on the employability diagnosis system can effectively support the improvement of students' employability, and the eight sub dimensions of employability testing have a significant impact on students' employability, which is consistent with the previous literature review research results. This study adopted the same approach as Martínez-Cerdá (et al., 2020) and analyzed the determining factors affecting employability. The following discussion is now conducted:

Employment willingness is related to employment motivation

Employment intention includes the degree indicator of employment motivation and qualitative descriptive indicators such as emotions, that is, whether one will find employment or pursue further education after graduation, whether finding a job is important to oneself, and whether one is willing to take the initiative to find a job. Existing research has also confirmed this, as motivational attitudes are significantly correlated with new employment related trends (Martínez Cerdá et al.,2020).This indicates that employment willingness can affect employability skill.Therefore, it is necessary to guide students to clarify their employment intentions and maintain a positive attitude towards job seeking.

Goal identification is related to employment goals

Clear and stable career goals are made based on self-awareness and career understanding, and are acceptable/recognized by oneself and will not be easily changed. Workers who have a highly positive outlook on future work often have better employability and higher quality of work (Martínez Cerdá et al.,2020). Therefore, in a blended learning environment, we should eliminate external factors and refocus students' efforts on self-development and enhancing professional identity(Bennett et.,al,2020,P, 1200).This indicates that goal identification can affect employability. This indicates that goal identification can affect employability. Therefore, it is important to guide students to establish clear and stable career goals as soon as possible.

Job analysis is related to employment actions

Job analysis is based on individual job search goals, evaluating students' level of understanding of the professional world. Job analysis is the foundation for standing out in the job search process. The job analysis process allows organizations to select suitable employees based on the requirements and details of each job, and based on the conditions and standards determined through job descriptions and job specifications.This is a very important first step in the recruitment process (Khtatbeh,et al.,2020).Some studies suggest that the level of employment depends on the work to be done (Espinoza et al., 2020),so we need to conduct job analysis on target positions to

improve employment success rates. A good example is that (Desta A. Hailemariam et al.,2018,P,104)improved the scientificity and efficiency of staff composition through the use of job analysis. This indicates that job analysis can affect employability. Therefore, it is necessary to guide students to enhance their understanding of the professional world.

Human capital confidence is related to employment competitiveness

Human capital is the assessment of whether one has sufficient competitiveness in the job market and future workplace based on their current learning and practical experience. A study suggests that employability has become an investment project, and the measure of success is the degree to which a person's human capital status matches the demand in the labor market, which is becoming increasingly difficult to measure(Chadha,D.,Toner,J.,2017).This requires us to have a clearer understanding of our own human capital status and a clear understanding of the market demand for target positions, and be able to accurately match our own human capital status with the market demand for target positions. This indicates that human capital can affect employability. Therefore, it is necessary to guide students to continuously enhance their competitiveness in employment.

Exploring job opportunities is related to job opportunities

Job opportunity exploration includes knowing how to explore employment opportunities, actively utilizing various channels and resources to obtain desired employment information, and organizing and evaluating the obtained information. The creation and maintenance of employment largely depend on employability factors, namely the ability of enterprises to create job opportunities with well-trained, autonomous, loyal, and satisfied employees who can innovate and create more added value(Khtatbeh,et al.,2020).This indicates that job opportunity exploration can affect employability. Therefore, it is necessary to guide students to learn how to explore employment opportunities and obtain employment information.

Job performance is related to employment outcomes

Job performance refers to measuring one's self marketing ability, that is, whether one can effectively express oneself in resumes and interviews, thereby successfully obtaining the expected position. This is consistent with the research findings of Dascalu et al. (2017), which suggest that a highly employable individual should possess adaptability, career self orientation, self entrepreneurial behavior, self marketing, and self commodification, as well as the employability test results of this study. This indicates that job performance can affect employability. Therefore, it is necessary to guide students to improve their self-marketing abilities.

Monitoring and regulation are related to employment status

Monitoring and regulation refers to the ability to develop a job search plan, track and evaluate one's job search progress, effectiveness of job search activities, emotional state, etc., reflect and summarize experiences, and adjust strategies to obtain the expected position. The study by Hong et al., (2023) proposed that "self perceived employability and future work self significance (FWSS) play a mediating and moderating role, respectively," providing support for the employability test results of this study. This indicates that monitoring and regulation can affect employability. Therefore, it is necessary to guide students to develop job search plans, track and evaluate job search progress, the effectiveness of job search activities, and emotional states.

Job search efficacy is related to job confidence

Job search efficacy is related to job confidence. The confidence in one's ability to find the job they want, that is, whether one believes that they can perform well in a series of job search processes such as resumes and interviews, and have the ability to solve difficulties encountered during the job search process. Therefore, enhancing job confidence and self-efficacy can help to continuously enhance employability or improve work efficiency (Espinoza et al., 2020). This indicates that job search efficacy can affect employability. Therefore, it is necessary to guide students to continuously enhance their confidence in job seeking.

Discussion on the Results of the Research on the Correlation of Employability in Eight Areas after the Employability Test

From the previous research results, it can be seen that after eight rounds of correlation analysis, it was found that after using role-play learning and workshop teaching models, students showed a positive correlation in their employment ability test results in eight aspects: employment intention, goal identification, job analysis, human capital confidence, job opportunity exploration, job performance, monitoring and regulation, and job efficacy. Next, we selected three groups for discussion.

Why is the identification of Part 2 goals related to Part 3 job analysis?

In the system of college students participating in employment guidance, it is necessary to first clarify their own goals, otherwise interviews, resumes, human capital, etc. cannot be effectively carried out, and providing employment skills guidance is ineffective. The common problem among current college students is the lack of clear self-awareness and career cognition, resulting in a lack of clear and stable job search goals, disconnection from the job market, lack of understanding of the professional world, and unrealistic employment expectations. When there is a serious gap between their own needs and employment expectations, they will develop a mentality of "slow employment" (Liu et al., 2023, P.34). Some studies have also found that salary plans, job design, environment, and performance management systems are positive and important factors for work motivation, and these motivational factors are important contents of work analysis. The comprehensive work motivation indicators show a positive and significant impact through regression with work performance (Forson et al., 2021). Further research has shown a significant positive correlation between job analysis and job performance (Khtatbeh et al., 2020). This can confirm that there is a positive correlation between goal identification and job analysis.

Why is Part 6 job performance related to Part 7 monitoring and regulation?

At present, the recruitment forms of employers are diversified, innovative, and systematic, which puts higher requirements on the employment ability of students. During the job search process, students will encounter different backgrounds and types of job seekers. How to appropriately promote themselves in the fierce job market and obtain expected employment positions requires students to be good at monitoring their job search behavior throughout the entire process of job application, and timely formulate or adjust job search plans; Timely adjust the job seeking status, respond to the psychological pressure brought by various written tests or interviews with strong psychological qualities, and be able to participate in the entire job seeking process with a stable mindset; Track your job search status and results in a timely manner, and follow up on every job search process in a timely manner. The common problem among current students is not only their lack of job performance, but also their lack of self-regulation ability. Recent studies have shown that employees with higher FWSS tend to adopt proactive career behaviors to narrow the gap between current and future career development. On the contrary, employees with lower FWSS have reduced proactive professional behavior and insufficient awareness of the gap between their current self and their expected future self (Hong et al., 2023). This can confirm that there is a positive correlation between job performance and monitoring regulation.

Why is there a correlation between Part 7 monitoring and Part 8 job search efficacy?

There is a certain time cycle for job seeking and career selection, and individuals inevitably encounter challenges and setbacks during this process. It is important to maintain resilience, overcome difficulties, and actively embrace challenges when facing setbacks, difficulties, and adversity. Firstly, better monitoring and regulation 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, learn from failures, quickly adjust and adapt, continue to work hard, and seek new development opportunities. In addition,

resilient college students have strong resilience and good adaptability, and are able to persevere, quickly recover, and ultimately achieve success in the face of adversity, setbacks, and failures (Xu & Wang,2023).Different from Hong et al.,(2023)who proposed that "the perceived employability and future work self significance (FWSS) play a mediating and moderating role respectively", this study suggests that "self-efficacy" in the field of psychology is not only relevant to the current employment status and psychology of college graduates, but also applicable to employed professionals. Self efficacy does indeed affect individual confidence, while (Hong et al.,2023)employees' perceived employability may be more suitable for personal sustainable development after obtaining employment positions.This can confirm that there is a positive correlation between monitoring regulation and job search efficacy.

In summary, the role-playing learning and workshop teaching model based on the employability diagnosis system is appropriate. The eight aspects promote and interact with each other, jointly promoting the improvement of students' employability. Because each learning activity in the teaching plan is closely linked to the corresponding improvement of employability. This is consistent with the research findings proposed by Owston, R., York, D. N.,&Malhotra, T. 2019, ,which suggest that active learning occurs when learning and teaching methods are in place and students are responsible for their own learning through meaningful activities that transform knowledge into action. Although some research findings are supported by existing research, they also have their own uniqueness, such as the lack of reliable research on the measurement of employability, which is based on subjective impressions formed in a relatively short period of time. Most studies only focus on the employability of fresh graduates, and little is known about how it is generated and how to observe and explain it, as pointed out by Espinoza et al. (2020).Mainly reflected in five aspects:1)This study belongs to the research of determining the reliability of employability measurement, comparing the skills emphasized by higher education institutions with the skills sought by graduate employers, and identifying the gap; 2) At the same time, this study's employability test is based on the employer's evaluation of students' employability when

recruiting graduates, which includes eight factors that affect their successful employment.

Students show high satisfaction with role-playing learning and workshop teaching models using embedded employability diagnostic systems

From the results of the questionnaire survey, it can be seen that regarding the basic information of the respondents, the majority of them are female (74%), with students aged 22-23 mainly accounting for (66%). Currently, students in their fourth year of college (100%) are the most majoring in e-commerce (100%), with the highest number of students from the southwest region (94%). Regarding the use of devices for model learning activities, the number of students using smartphones for learning is the highest, accounting for 88%, indicating a high level of student engagement in digital learning. This is consistent with the view proposed by Schools et al.,(2021)that "due to the continuous improvement of digitalization, interest in digital personalized learning (DPL) continues to grow.". In terms of the time used in extracurricular learning activities, students with a learning time range from 9:00 to 12:00 have the most time, and students who engage in extracurricular learning activities in school have the most time. This is consistent with the research results proposed by Clark, C. E. J.,&Post, G., (2021), which suggest that completing the required e-learning before f2f class significantly improves students' performance in relevant assessments and supports students in completing their pre e-learning learning before participating in synchronous f2f courses. It can be seen that the learning model is highly compatible with the characteristics of learners, equipment usage habits,extracurricular learning activity time, and location. From the satisfaction survey results of model learning,it can be seen that 50 experimental subjects showed overall high satisfaction with role-playing learning and workshop teaching models.At the same time, they also showed high satisfaction with the evaluation of learning satisfaction in five aspects:teaching personnel and learners involved in the learning model, the process of organizing teaching activities, the learning environment, learning support tools,and evaluation.This study selected the top three items with high satisfaction for the following discussion.

Students have the highest satisfaction with the learning environment, which is consistent with the viewpoint proposed by Mestan, K.,(2019)that "blended learning improves engagement and provides students with a pathway to participate in learning materials";The results are consistent with Liyanawatta.M.,(2021)who proposed that in a rich situational learning environment, learners can be arranged in different situational learning tasks to apply existing knowledge and experience; It can also be linked to Espinoza et al.(2020)who proposed that "practical work experience does indeed increase skills for improving employability. Universities should provide practical work experience before graduation, rather than" training "students in job skills in terms of employability."The teaching model learning in this study provides graduates with a practical stage of simulating actual work experience, simulating possible work scenarios in actual work, such as scenario simulation stress interviews. A study by Bennett,et al.,(2020) suggests that project teams use anonymous student data to transform previously common "career" workshops into targeted workshops where students explore individual and queue discoveries and participate in developmental activities based on the data. From this, it can be seen that the workshop teaching environment meets the learning expectations of students and promotes employability skill.

Students are the second most satisfied with learning support tools, which is consistent with the view put forward by (Dai et al.,2023) that "Generation Z college students, as aborigines in the digital era, have outstanding digital viability and information technology control ability, and more and more Generation Z choose to use various resources provided by the Internet platform to actively cultivate knowledge and ability that match their expected work through" pan knowledge"learning, and improve their ability to cope with future career challenges"; This is consistent with Hartnett,M.(2021)'s view that "digital technology, as a medium and facilitator of learning, is changing higher education, changing the way and timing of higher education, changing what it requires, changing who has the opportunity to receive higher education, and changing people's recognition of abilities and skills.";Dascalu et al.(2017)proposed an EmployLeaP to enhance employability, which is consistent with

the measures taken in this study to use an employability diagnostic system to enhance students' employability.

Students have the third highest satisfaction with evaluation, which is consistent with the viewpoint proposed by Clark, C. E. J., & Post, G. 2021 that "students are more likely to choose evaluation tasks directly related to their courses." This also demonstrates the importance of evaluation in teaching, as effective evaluation methods can promote active learning among students and increase learning engagement.

In summary, the combination of electronic learning based on employability diagnosis system, role-play learning, and innovative workshop teaching can support the development of students' employability. There is a substantial difference between this study and previous studies on "materialistic learning that only focuses on the work world". This study focuses on cultivating students' ability for sustained self-development. In most cases, the supply and demand relationship will affect the level of employment. Therefore, employability should not be understood as an individual's ability, but rather as a supply-demand structure (Espinoza et al., 2020). The proposal of the teaching model links the supply of talent on the school side with the demand for talent on the market side, compensating for the long-standing problem of supply-demand mismatch. Teaching design practices are carried out based on the job requirements of graduates in different industries in the job market, in order to influence the personal characteristics of students. The design of the teaching model captures the main needs of current students, accurately matching their employability with the market demand for target positions, and improving the success rate of job applications; At the same time, the teaching model combines the digital and situational learning methods that students prefer, and the role-play learning and workshop teaching activities integrated into the teaching process add learning interest. Therefore, students have a high recognition of the model.

Phase IV To confirm the learning model form of role-play learning with workshop teaching,by using employability diagnostic system to enhance employability skills .

Discussion on the Research Results of Model Formal Confirmation Evaluation

Experts highly recognize the formal form of role-playing learning and workshop teaching models based on employability diagnostic systems

From the above research results, it can be seen that the overall average level of role-playing learning and workshop teaching model evaluation based on the employability diagnostic system is high and appropriate.It is very suitable in five aspects of model components, process, technology, media,and overall evaluation, and meets the quality requirements. The components and processes of the model are very appropriate.This is in line with Olivares et al.,(2021)who proposed that "high-quality digital age methods are based on interaction between students and faculty, with each person responsible for a part of the teaching process. Learning is student-centered, established through communication and interaction with peers and teachers, active learning, and performance evaluation. Teaching is mainly guided by educators, relies on synchronous interaction through online meetings, and relies on a learning management system (LMS). It is a coincidence that content management relies on multimedia resources to strengthen learning. The technique of the model is very appropriate. This is consistent with the research findings proposed by Pedaste,et.al (2023, P, 1),which states that "digital technology is constantly advancing, bringing us unprecedented opportunities and freedom. Digital capabilities mean that we can understand the media, search and critically evaluate information, and communicate with others in various ways.".The medium of the model is very appropriate.This is consistent with Olivares et al.,(2021)who proposed that "multimedia resources integrate audio, video, text data, and images, which are either created by educators or planned by online content. Educators record videos, create audiovisual content, and edit clips to integrate images or sounds. These resources enable students to learn, improve, update knowledge, and test themselves." The results are consistent. This can also be linked to (Zhu,G.,Raman,P.,

Xing,W. et al.,2021)'s proposal that "digital media and technology environments (such as knowledge forums and Google documents) can enable learners to participate in knowledge building activities, further supporting participation. To this end, we are studying how the design of knowledge building activities that involve students in technology enhanced learning environments affects their level of participation in the curriculum."

In summary, the electronic learning based on the employability diagnosis system proposed in this study, combined with role-play learning and workshop teaching models, is appropriate. The components and processes of the model, as well as the technologies and media used, are all very suitable, reflecting digitalization and contextualization. Digital learning is a suitable method for students, as online training courses can adapt to their specific characteristics and needs (Martínez-Cerdá et al., 2020). The employment ability diagnosis system used in this study is specifically designed to improve students' dynamic and accurate employment ability diagnosis, providing real-time reference for offline teaching design and teaching activities, reflecting the use of digital learning innovation and teaching design innovation to improve students' employment ability. Therefore, the model has been certified by experts.

Research limitations

Firstly, at the level of electronic learning, can students consciously complete theoretical knowledge learning on platforms such as employment ability diagnosis system and career assessment before class? How to use digital and situational learning environments to stimulate students' learning interest and motivation? It is difficult to ensure the quality of learning.

The second issue is that there is a conflict between the time for teaching theoretical knowledge in employment guidance courses and the time for teaching practical activities in employment guidance. If the theoretical knowledge is explained properly, the time or form of practical activities is limited, and the effectiveness of employment guidance practical activities is not good; If rich employment guidance

practical activities are ensured and theoretical knowledge is not elaborated enough, it will lead to students lacking the ability to apply theory to practice. This is a common problem in previous employment guidance courses and also one of the difficult problems in this research topic.

The third challenge of this research is how to evaluate the effectiveness of improving employability. In the past, the examination format for employment guidance courses was mostly in the form of submitting career planning documents, holiday experience practice designs, holiday experience practice reports, and other forms of assessment. The evaluation of learning effectiveness was not in-depth enough, and there was no precise evaluation and assessment based on the actual problems of college students' employability.

Research limitations

This study also has the following research limitations:

- At the level of e-learning, can students consciously complete the theoretical knowledge learning on the platform before class? How can electronic and situational learning environments be used to stimulate students' learning interest and motivation? It was difficult to ensure the quality of learning.
- The time for teaching theoretical knowledge in employment guidance courses conflicts with the time for teaching practical activities in employment guidance. This was a common problem in previous employment guidance courses and also one of the difficult problems in this study.

Implications and future research

- Provide clear and efficient teaching models and reference guidelines for daily curriculum-teaching management of college employment guidance teachers.
- Provide scientific and accurate action directions and decision-making foundations for daily employment guidance and counseling services provided by college employment and entrepreneurship staff.

- Provide novel and typical teaching ideas and methods for daily teaching-design thinking performed by other types of college course teachers.

The model currently lacks empirical testing. In the next step, researchers will revise and improve the role-play learning and workshop teaching model proposed in this study, and use it in conjunction with lesson plans for subsequent research in the third and fourth phases.

Research suggestions

The development of a role-playing learning and workshop teaching model proposed in this study mainly assists in the development of a digital learning based employability diagnostic system to improve the employability of Chinese undergraduate graduates. The participating students will learn through a combination of online and offline methods, and the learning activities integrate role-playing learning and workshop teaching models.

- Can provide clear and efficient teaching modes and reference guidelines for daily course teaching management for college employment guidance teachers;
- Can Provide scientific and accurate action directions and decision-making basis for daily employment guidance and consulting services for college employment and entrepreneurship workers;
- Can provide novel and typical teaching ideas and methods for daily teaching design and thinking of teachers of other types of courses in universities;
- Can provide clear inspiration and a clear path for the development of hybrid digital learning education platforms and the promotion of experiential employment guidance models in the future.

Future research

The next step is for researchers to continuously optimize the role-playing learning and workshop teaching models proposed in this study, and to continuously practice and improve them in employment guidance courses.

Future research will focus on the trend of digital transformation in education, continuously innovate teaching models and practices, explore the innovation and construction of learning evaluation methods supported by intelligent technology, promote the digitization of employment data, employment processes, and employment services, and effectively enhance students' competitiveness in employment.



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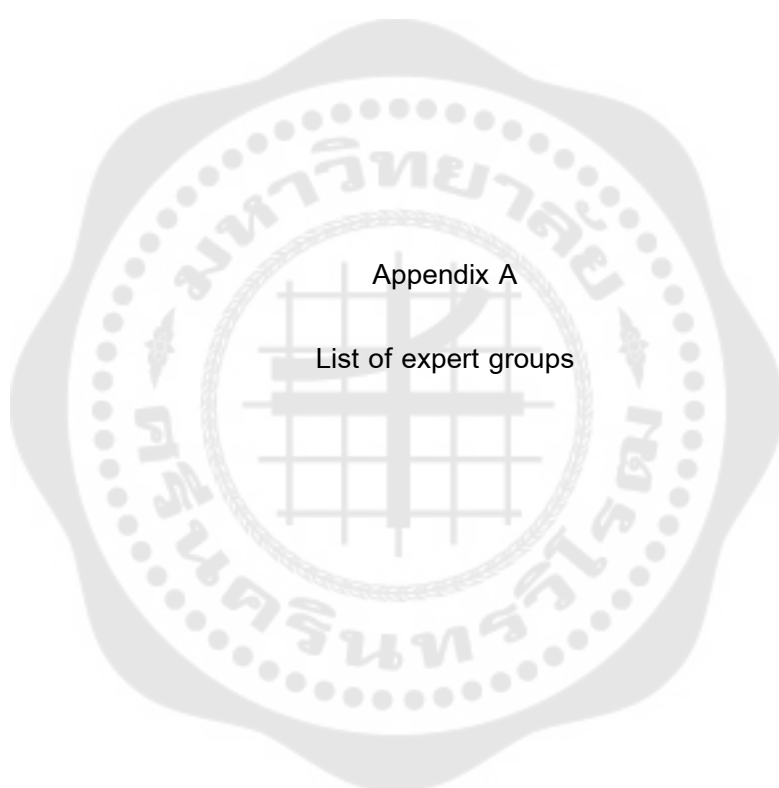
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APPENDIX



Appendix A

List of expert groups

The IOC expert group invited for the study is as follows:

Expert Name	School	Official Capacity	Areas of expertise
Asst.Prof.Dr. Duangjai. Sakaew	Srinakharinwirot University	Asst.Prof.	
Asst.Prof.Theerawadee.	Chulalongkorn University	Asst.Prof.	
Asst Prof. Dr. Anchana Suksomji	Faculty of Education, Suan Sunandha Rajabhat University	Asst.Prof.	

The study include 5 model experts as follows:

Expert Name	School	Official Capacity	Areas of expertise
Dr.Chutiwat. Suwattipong	Sukhothai thammathirat University,Thailand	Asst.Prof.	Educational Technology
Dr.Sutithep. Siripipattanakul	Kasetsart University ,Thailand	Asst.Prof.	Online learning, Educational technology
Asst.Prof.Dr. Kornkrit Meemongkol	Srinakharinwirot University	Asst.Prof.Dr	English Teaching
Asst.Prof.DengPing	Yunnan University of Finance and Economics	Asst.Prof.	Application of computer technology
Zhao WenDong	Yunnan University of Finance and Economics	Lecturer	Education、 Employment guidance

Graduate School Ethics Review Training Document



AF19-03-03.1
August, 2023

หนังสือรับรองจริยธรรมการวิจัยในมนุษย์
หนังสือฉบับนี้ให้ไว้เพื่อแสดงว่า

ชื่อโครงการวิจัย : การพัฒนารูปแบบการเรียนการสอนแบบทบาทสมมติเป็นฐานร่วมกับการสอนปฏิบัติการโดยใช้ระบบ
วินิจัยทักษะการทำงานเพื่อส่งเสริมทักษะการทำงานสำหรับนักศึกษาจีนระดับปริญญาตรี

ชื่อหัวหน้าโครงการวิจัย : นางสาวJiangXia Luo

หน่วยงานต้นสังกัด : คณะศึกษาศาสตร์ มหาวิทยาลัยศรีนครินทรวิโรฒ

หมายเลขรับรองโครงการวิจัย : SWUEC-672028


รายการเอกสารที่รับรอง :

- | | |
|---|-----------------------------------|
| 1. แบบเสนอเพื่อขอรับการพิจารณา | ฉบับที่ 2 ลงวันที่ 31 มกราคม 2567 |
| 2. โครงการวิจัยฉบับสมบูรณ์ | ฉบับที่ 1 ลงวันที่ 5 มกราคม 2567 |
| 3. เอกสารข้อมูลและขอความยินยอมสำหรับอาสาสมัคร | ฉบับที่ 2 ลงวันที่ 31 มกราคม 2567 |
| 4. แบบบันทึกข้อมูล | ฉบับที่ 1 ลงวันที่ 5 มกราคม 2567 |
| 5. ประวัติผู้วิจัย | |

ได้ผ่านการรับรองจากคณะกรรมการจริยธรรมสำหรับพิจารณาโครงการวิจัยในมนุษย์ มหาวิทยาลัยศรีนครินทรวิโรฒ โดยยึดหลักเกณฑ์ตาม Declaration of Helsinki, Belmont Report, International Conference on Harmonization in Good Clinical Practice (ICH-GCP), International Guidelines for Human Research ตลอดจนกฎหมาย ข้อบังคับและข้อกำหนดภายในประเทศ จึงเห็นสมควรให้ดำเนินการวิจัยตามโครงการวิจัยนี้ได้

วันที่รับรอง : 5 กุมภาพันธ์ 2567

วันที่หมดอายุ : 4 กุมภาพันธ์ 2568

(ลงชื่อ).....


(รองศาสตราจารย์ ดร.สิทธิพงษ์ วัฒนานนท์สกุล)

ประธานคณะกรรมการจริยธรรมสำหรับพิจารณาโครงการวิจัยที่ทำในมนุษย์

ชุดสังคมศาสตร์และพฤติกรรมศาสตร์ (ชุดที่ 2)

มหาวิทยาลัยศรีนครินทรวิโรฒ



Appendix B

Research instruments

Phase 1

- Instrument 1: Survey Questionnaire
- Instrument 2: Semi structured interviews

Phase2

-Instrument 3: An evaluation on the style and structure of a draft with role-play-based learning and workshop teaching model

-Instrument 4: Lesson plan

Phase3

-Instrument 5: Employability test form

-Instrument 6: Student satisfaction survey

Phase4

-Instrument 7: The form confirm evaluation of role-play-based learning and workshop teaching model

Phase 1

Appendix 1 Needs assessment Survey Questionnaire form

A survey questionnaire on the current development status and student needs of role-play-based learning with workshop teaching model, by using employability diagnostic system to enhance employability skills for undergraduate students in China

(For 150 students)

Instruction: The survey questionnaire is mainly aimed at students. Firstly, content experts, evaluation experts, and technical experts review the consistency between the questionnaire content and research objectives. After obtaining expert permission, a survey is conducted with students to understand the current situation and their needs for model development. Develop a role-play-based learning with workshop teaching model, by using employability diagnostic system to enhance employability skills. The questionnaire consists of four parts.

Part 1: Survey the basic information of the respondents in the questionnaire, and ask the evaluator to fill in or mark ✓ the fields that best match your true situation.

Part 2: Assessment the usability of students' information technology. This includes knowledge level, general knowledge and skills in using information technology, as well as equipment for using multimedia, networks, and digital videos. Evaluate based on the issue of dosage.

Part 3: Assessment students' actual and expected abilities in using employability diagnostic system to develop role-play-based learning with workshop teaching model,

and use employability diagnostic system as the foundation for e-learning to promote employability. Evaluate based on the issue of dosage.

Part 4: Assessment students' realistic and expected conditions for the development of the model, develop a role-play-based learning with workshop teaching model, and use an employability diagnostic system as the foundation for e-learning to promote employability skills. Evaluate based on the issue of dosage.

Invite students to use a 5-level scale for needs assessment.

5 represents the highest demand;

4 represents higher demand;

3 represents moderate demand;

2 represents lower demand;

1 represents minimum demand

Part1: Survey the basic information of the respondents in the questionnaire, and ask the evaluator to fill in or mark ✓ the fields that best match your true situation.

General Information of Questionnaire Respondents

(For 150 students)

Instruction: The evaluator should fill in or mark the fields that best match your actual situation.

Question

1. Basic personal information

1.1 Gender

Question

Male () Female ()

1.2 Age

1.3 Grade being studied

1.4 Major

1.5 Geography

Northern () Southern () Central () Eastern () Western ()

Others ()

2. Job interview experience

Yes () No ()

3. Academic performance

Excellent () Good () Moderate () Poor ()

4. Role play-based learning and workshop learning experience

Yes () No ()

5. Previous knowledge or training related to simulated interviews

Yes () No ()

Part 2: Assessment students' availability of information technology, and ask the

evaluator to fill in or mark \surd the fields that best match your true situation.

(For 150 students)

Evaluation list	Actual Ability					Expected Ability					Suggestion
	5	4	3	2	1	5	4	3	2	1	
Questions											
1. Degree of mastery of information technology											
1.1 Minimal (can be used for communication, such as online											

Evaluation list	Actual Ability					Expected Ability					Suggestion
	5	4	3	2	1	5	4	3	2	1	
Questions											
Production (such as Adobe Production, Adobe Photoshop, After Effect).											
3.Ability to use various system platforms											
3.1 Proficient in using various learning systems, apps, and platforms in the school.											
3.2 Able to use various network devices for online learning.											

More comment/suggestions for questions

More comment/suggestions for questions

Part 4: Assessment students' realistic and expected conditions for the development of the model, develop a role-play-based learning with workshop teaching model, and use an employability diagnostic system as the foundation for e-learning to promote employability skills. Evaluate based on the issue of dosage. According to the evaluation criteria, visitors place tags in the cells that best match the comments.

(For 150students)

Instruction:Ask the person filling out the form to rate the list based on the following value list rating table by placing a \surd in the blank space, under both actual and expected conditions, in the most suitable evaluation.

Evaluation list	Realistic conditions					Expected conditions					Suggestions
	5	4	3	2	1	5	4	3	2	1	
Item											
1.Regarding learners and teaching staff											
1.1Teaching staff conduct academic performance evaluation tests before class.											

Evaluation list	Realistic conditions					Expected conditions					Suggestions
	5	4	3	2	1	5	4	3	2	1	
Item											
1.Regarding learners and teaching staff											
1.2Teaching staff conduct after-school learning performance evaluation tests											
1.3The division of study groups is scientific.											
1.4The division of learning groups takes into account individual differences among students (gender, age, major, region, motivation, expectations, etc.).											
1.5The teacher demonstrated empathy and praise, and strengthened the learners' learning motivation.											
2.Organizational aspects of teaching activities											
2.1The organization of teaching activities can enable students to learn in the practice of improving their employability skills.											
2.2 The establishment of teaching activities is linked to the improvement of employability skills, such as conducting											

Evaluation list	Realistic conditions					Expected conditions					Suggestions
	5	4	3	2	1	5	4	3	2	1	
Item											
1.Regarding learners and teaching staff											
employment counseling, simulated interviews, scenario drills, case studies, and other activities.											
2.3Teaching staff should provide extracurricular video materials to students before conducting classroom activities.											
2.4Teachers organize learning activities, starting from the problems with students' employability and finding solutions to these problems.											
2.5Teachers organize activities with a focus on providing opportunities for all learners to engage in practical training for improving employment skills.											
2.6Teaching activities encourage students to respect and understand cultural differences.											
2.7 Teaching staff organize activities that emphasize rule-based reasoning and judgments											

Evaluation list	Realistic conditions					Expected conditions					Suggestions
	5	4	3	2	1	5	4	3	2	1	
Item											
1.Regarding learners and teaching staff											
based on reliable data.											
3. Electronic learning environment											
3.1 Use electronic information technology for teaching management.											
3.2By using various electronic devices on the internet, learning materials can be accessed anytime and anywhere.											
3.3 The degree of electronic sharing is relatively high.											
3.4 Using diverse social network applications in teaching management.											
3.5 Use technology to communicate between learners.											
4.Measurement and evaluation aspects											
4.1Weekly teaching evaluation.											
4.2 The homework is consistent with the course content.											
4.3 There are corresponding teaching evaluation theories.											
4.4 There is a teaching practice											

Evaluation list	Realistic conditions					Expected conditions					Suggestions
	5	4	3	2	1	5	4	3	2	1	
Item											
1.Regarding learners and teaching staff evaluation.											
4.5 Student participation in model evaluation.											
5.Effectiveness of improving employability skills											
5.1Enhancing students' employability through model learning.											
5.2 Promoted the improvement of students' employability through the testing of the employability diagnostic system.											

More comment/suggestions for questions

Appendix 2 Semi structured interviews

A semi-structured interview on the conditions and opinions of role-play-based learning with workshop teaching model, by using employability diagnostic system to enhance employability skills for undergraduate students in China

(For five experts)

Instruction:Mainly for five expert use. The consistency between the interview content and research objectives is reviewed by content experts, and the current situation, needs, and expert opinions are understood through expert interviews. A role-play-based learning with workshop teaching model is developed, based on e-learning, to evaluate the employment ability of 30 control group learners.

The questionnaire consists of two parts.

Part1:Basic information and expert status of experts, survey respondents' basic information, and have evaluators fill in or mark(√) the fields that best match your true situation.

Part2:Issues related to development conditions and needs.

Part1:Basic information and expert status of experts, survey respondents' basic information, and have evaluators fill in or mark(√) the fields that best match your true situation.

Evaluation list

The question

1. Expert field

2.Teaching experience

3.Work area

4. Others

The comment/suggestion

Part 2: Issues related to development conditions and needs.

Issues related to development conditions and needs.

(For five experts)

Instruction: Please paste a marker in your comment bar and write down useful suggestions during further evaluation.

Question	Suggestion
1.About Condition and needs	
Status: 1.What do you think is the current situation of using e-learning technology to support students' employability improvement?	
Issus: 2.What problems did you find when using e-learning technology for teaching?	
Trens: 3. What trends do you found in using e-learning technologies for learning management?	
2.About components	
2.1What aspects do you think should be taken into account when using the role-play-based learning with workshop teaching model for learning management?	
2.2What aspects do you think an electronic learning environment based on employability diagnosis system should include?	
2. 3How to combine an electronic learning based employability diagnosis system with role-play-based learning with workshop teaching to improve students' employability skills?	

3.About process	
3.1How to effectively manage education in an electronic society?	
3.2How to guide students to use e-learning for employability training?	
3.3How to use the role-play-based learning with workshop teaching model based on employability diagnostic system to improve students' employability skills?	
3. 4What risk factors do you think are present in using role-play-based learning with workshop teaching models based on Employability diagnostic system for employability enhancement practices?	
3.5How to prevent risk factors in the use of role-play-based learning with workshop teaching models based on employability diagnosis system for employability enhancement practices?	
3.6.Feasibility of consulting experts to conduct a 6-week lesson plan for experimental group students in the third phase.(The lesson plan is mainly used for job search simulation training courses, and the school has set the course time for this course to six weeks.)	
4.About elements	
4.1How to effectively organize a employability diagnostic system learning environment?	
4.2How to effectively organize role-play-based learning with workshop teaching activities?	

4.3What kind of teaching feedback do you think is needed to promote learners' employability skills by using role-playbased learning with workshop teaching model based on employability diagnostic system?	
4.4How to evaluate students' employability skills?	
4.5How to evaluate learning model?	
5.About results	
5.1Is the employability diagnosis system can support students' learning management?	
5.2Is the role-play-based learning with workshop teaching can support student learning management?	
5.3Is the role-play-based learning with workshop teaching based on situational can support students' employability enhancement training?	
5.4Is the role-play-based learning combined with workshop teaching model based on employability diagnosis system can support the improvement of students' employability skills?	
6.About form	
Do you think a teaching model that combines role-play-based learning with workshop teaching based on e-learning should be presented in what form is more suitable?	

More comment/suggestions for interview questions



Appendix 3: An evaluation on the style and structure of a draft with role-play-based learning with workshop teaching model

An evaluation on the style and structure of a draft with role-play-based learning with workshop teaching model, by using employability diagnostic system as the basis for e-learning to promote employability skills for undergraduate students in China

(For 5 experts)

Instruction: The draft model is mainly intended for use by five experts. Firstly, content experts, evaluation experts, and technical experts review the consistency between the structure list content and research objectives. Then, five experts evaluate the style and structure of the model draft, including eight aspects: style overview, learning activities, learning environment, learners, teaching process, teaching tools, feedback, and evaluation. By evaluating and developing a role-play-based learning with workshop teaching model, using employability diagnostic system as the basis of e-learning, to promote employability skills.

It is divided into two parts:

Part 1: A style evaluation on the draft of role-play-based learning with workshop teaching model, using an employability diagnostic system as the foundation for e-learning to promote employability enhancement.

Part 2: A structured evaluation list on the draft of role-play-based learning with workshop teaching model, using an employability diagnostic system as the foundation for e-learning to promote employability enhancement.

Instruction:Please mark a (✓) in the blank space based on the value list rating table below to rate the list in the most suitable situation for evaluation, and write down useful suggestions during further evaluation.

The five experts use the meaning:

5 means the most suitable,

4 means that it is very suitable,

3 means moderate suitability,

2 means unsuitable,

1 means very unsuitable.

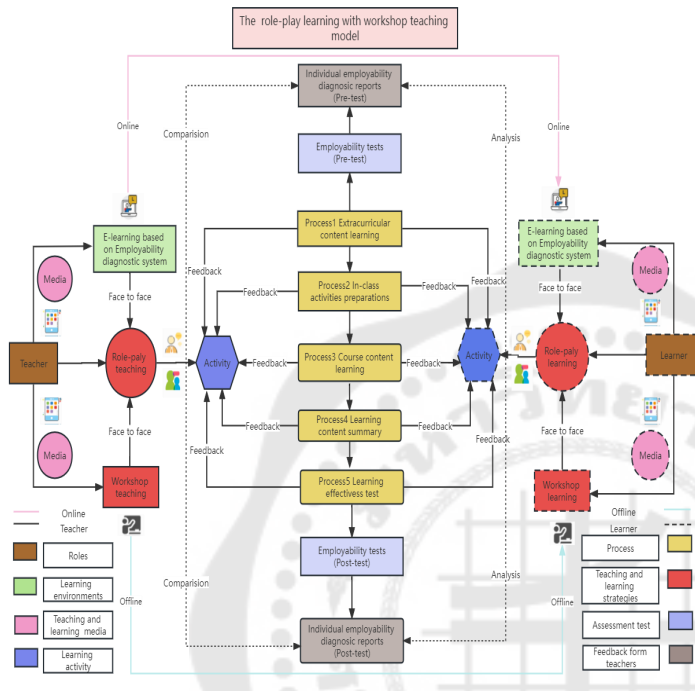
Part 1: A style evaluation on the draft of role-play-based learning with workshop teaching model, using an employability diagnostic system as the foundation for e-learning to promote employability enhancement.

(For five experts)

Instruction:Please mark a (✓) in the blank space based on the value list rating table below to rate the list in the most suitable situation for evaluation, and write down useful suggestions during further evaluation.

Evaluation list	Evaluation level					Suggestion
	5	4	3	2	1	

1. Model draft diagram



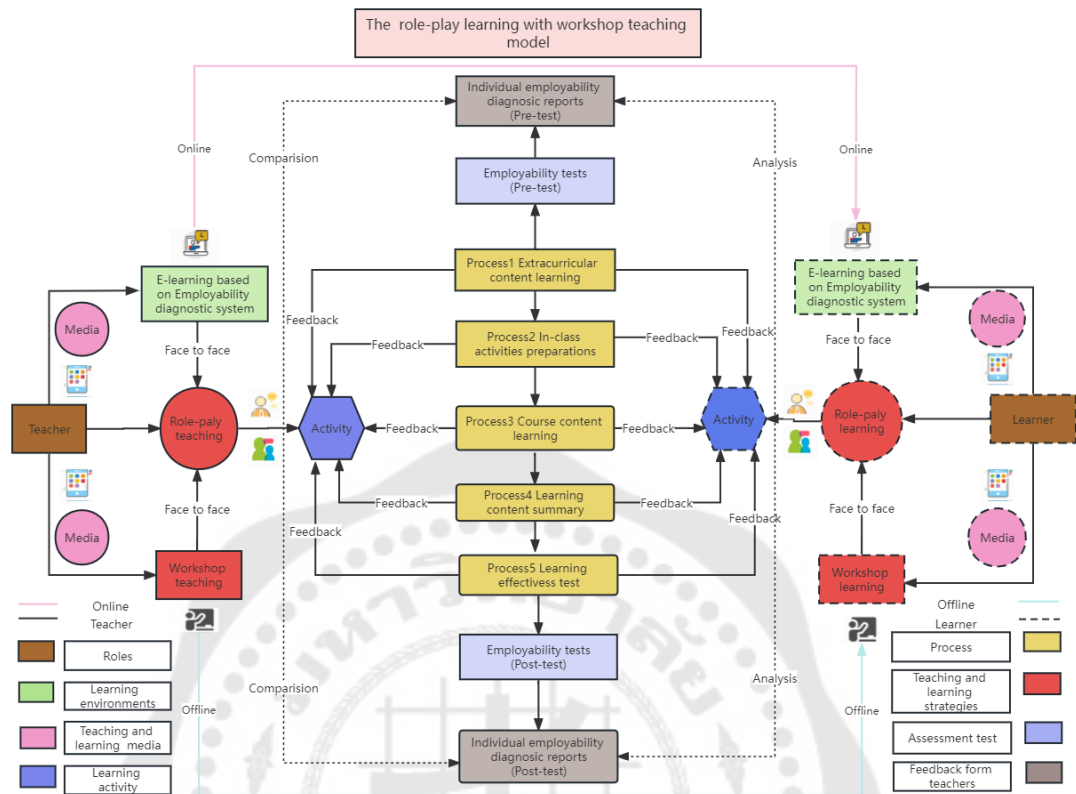
This model diagram mainly consists of eight components:

1. Brown - Role (teacher and learner)
2. Green - Learning Environment (E-Learning Based on employability diagnostic system)
3. Pink teaching (learning) media
4. Blue - Learning Activity
5. Yellow - Teaching process (five steps)
6. Red - Teaching (Learning) Strategies
7. Purple - Evaluation Test
8. Brown - feedback from teachers (students)

Teacher (Input): (Online) theoretical knowledge and test is taught through employability diagnostic systems, (offline) practical knowledge is completed through role-play-based learning activities and workshop teaching activities. Course teaching - setting questions -

2.Evaluation of model Style						
1.1 The principles, concepts, theories, etc. of model design are appropriate and consistent.						
1.2The purpose of the model is appropriate.						
1.3The model diagram shows the appropriate element and process relationships.						
1.4The model diagram can accurately express and is easy to understand.						
1.5The draft model reflects the combination of online and offline, theoretical and practical learning.						

More comment/suggestions for draft model



Part 2: A structured evaluation list on the draft of role-play-based learning with workshop teaching model, using an employability diagnostic system as the foundation for e-learning to promote employability enhancement.

(For five experts)

Instruction: Please mark a (✓) in the blank space based on the value list rating table below to rate the list in the most suitable situation for evaluation, and write down useful suggestions during further evaluation.

Evaluation list	Evaluation level					Suggestion
	5	4	3	2	1	
Problem/Structure						
1. The roles						
1.1 The draft model includes complete roles (Teaching staff and learners)						
1.2 The draft model reflects the two-way interaction between roles.						
2. Learning activities						
2.1 Role-play-based and workshop practice exchange activities are diverse and diverse.						
2.2 Role-play-based and workshop activities have proposed phased solutions around the theme of enhancing employability.						
2.3 The learning activity can improve the employability skills.						
2.4 The assignment matching with the activity.						
3. Learning environment						

Evaluation list	Evaluation level					Suggestion
	5	4	3	2	1	
Problem/Structure						
3.1The availability of technical equipment and materials that support internet learning.						
3.2Learning materials can be accessed anytime and anywhere on the Internet using a variety of electronic devices.						
3.3Providing a classroom atmosphere conducive to electronic learning.						
3.4Interesting and diverse learning courses are provided in the classroom, encouraging learners to participate in role-play-based learning and workshop activities.						
3.5Encourage learners to engage in employability enhancement thinking in role-play-based learning with workshop learning environments.						
3.6The tools of the Employability diagnostic system is easy to use.						
4.Learning strategy						
4.1Role-playing learning strategies and employability enhancement topics fit in.						
4.2 Workshop teaching theory and employability promotion theme it fits.						
4.3 Combination of role-playing learning and workshop teaching mode support employability.						

Evaluation list	Evaluation level					Suggestion
	5	4	3	2	1	
Problem/Structure						
5.Teaching process						
5.1 The teaching process of the model draft is complete.						
5.2 The teaching process of the model draft is closely linked.						
5.3 The teaching process match with the role-play-based learning with workshop teaching model.						
6.Support Tools						
6.1 A variety of teaching tools have been used in the classroom, which are convenient and easy to use.						
6.2 The selection of teaching tools can support employability promotion practice.						
6.3 The tool helps students track their progress in employability.						
7.Feedback						
7.1 The feedback from teachers and students reflects two-way interaction.						
7.2Feedback is beneficial for students to timely summarize and reflect on their knowledge.						
7.3 The Employment ability diagnostic system						

Evaluation list	Evaluation level					Suggestion
	5	4	3	2	1	
Problem/Structure						
can support the feedback tool for students.						
8.Evaluation						
8.1The improvement of learners' employability was evaluated before and after class.						
8.2Measure and evaluate students based on their actual weekly learning situation, including theory and practice.						
8.3Evaluated learners' satisfaction with model learning.						

More comment/suggestions for draft model

Appendix 4 Lesson Plan

A lesson plan on role-play-based learningwith workshop teaching model, by using

employability diagnostic system to enhance employability skills

for undergraduate students in China

(For five experts)

Instruction:Mainly used for evaluation by five experts. Firstly, content experts, evaluation experts, and technical experts inspect the process, teaching media, teaching activities, evaluation methods, and homework feedback of the teaching plan to ensure consistency between the teaching plan and research objectives. After obtaining the permission of the experts, 5 more experts will be asked to rate and evaluate the lesson plan.

Experts Using the IOC to evaluate the consistency between questionnaire and objectives:

- 1 represents that the problem invalid ;

0 represents that the problem no opinion ;

1 represents that the problem is valid.

For five experts using the following criteria:

5 means that the plan is highly feasible;

4 means the plan is feasible;

3 means that the plan is not very feasible;

2 means that the plan is not feasible;

1 means that the plan is very infeasible.

Instruction:Ask the person filling out the form to rate the list based on the following value list rating table by placing a (√) in the blank space.

Evaluation list							Evaluation level					Suggestion					
A study activity plan for the first week.							5										
							4										
							3										
							2										
							1										
Learning time	Learning objective	Learning content (Analysis of the Recruitment Model of Employers)	Learning activity	Learning media	Measurement and Evaluation	Products											
Week1	1.Enable learners to understand the process of talent recruitment, recruitment	Stage 1: Learn extracurricular content (Online)	Teaching staff: 1) Release teaching courseware, videos, and other course related learning resources in advance through the Employability diagnostic system. 2) Release	Employability diagnostic system, Computer, Smartphone, Tablet, Video, Sound, Picture	Learners reflect on the content learned this week.	Employability diagnostic system Background Learning Data Report											

Evaluation list	A study activity plan for the first week.						Suggestion								
	Learning time	Learning objective	Learning content (Analysis of the Recruitment Model of Employers)	Learning activity	Learning media	Measurement and Evaluation		Products							
									Evaluation level						
									5	4	3	2	1		
	standards and forms, and methods of talent evaluation. 2. Organize a test to measure		learning task notifications in advance through the Employability diagnostic system. (Online) Learners: 1) Learn the theoretical												

Evaluation list		A study activity plan for the first week.						Evaluation level				Suggestion		
		Learning time	Learning objective	Learning content (Analysis of the Recruitment Model of Employers)	Learning activity	Learning media	Measurement and Evaluation	Products	5	4	3		2	1
	students' employability before learning.		content of the employer recruitment model through the Employability diagnostic system;											
	3.Encourage students to participate in		2) Write a study plan. (Online)											
Week1		Stage 2: Preparing for	Teaching staff:	Employability	Survey Results of									

Evaluation list								Evaluation level					Suggestion		
A study activity plan for the first week.								5							
								4							
								3							
								2							
								1							
Learning time	Learning objective	Learning content	Learning activity	Learning media	Measurement and Evaluation	Products									
(Lesson 1: 50 minutes)	active workshop teaching activities. 4. Classify learning groups.	(Analysis of the Recruitment Model of Employers) classroom activities (F2F&Online)	1). Ask learners to conduct surveys on rain classroom applications (To investigate and analyze data from sample learners). 2) Introduce the learning rules of	diagnostic system, Computer, Smartphone, Tablet, Video, Sound, Picture	Student Employability diagnostic system Learning										

Evaluation list	A study activity plan for the first week.						Evaluation level					Suggestion	
	Learning time	Learning objective	Learning content (Analysis of the Recruitment Model of Employers)	Learning activity	Learning media	Measurement and Evaluation	Products	5	4	3	2		1
				the workshop teaching mode. 3) Introduce role-play-based learning strategies and ideas (Self development ability) (F2F&Online)									
				4) Allow candidates to complete	The teacher	Employability skill	Personal						

Evaluation list							A study activity plan for the first week.				Evaluation level				Suggestion	
Learning time		Learning objective	Learning content		Learning activity	Learning media	Measurement and Evaluation		Products		5	4	3	2	1	
			(Analysis of the Recruitment Model of Employers)		the exam 50 minutes in advance. (Job application ability, professional technical ability, self-development ability) (Online)	distributes online test papers in the classroom through the employability diagnostic system	Test(Pre-test)		employability diagnostic report (before learning)							

Evaluation list	A study activity plan for the first week.						Suggestion								
	Learning time	Learning objective	Learning content (Analysis of the Recruitment Model of Employers)	Learning activity	Learning media	Measurement and Evaluation		Products							
									Evaluation level						
									5	4	3	2	1		
				Learners: 1) On the employability diagnostic systems Provide learning suggestions. (Online) 2) Ask questions about the	WeChat and QQ learning groups- Employability diagnostic system	Each learner has a WeChat and QQ group learning group. All learners can enter the employability									

Evaluation list							Evaluation level				Suggestion						
A study activity plan for the first week.							5	4	3	2	1						
							Learning time	Learning objective	Learning content (Analysis of the Recruitment Model of Employers)	Learning activity	Learning media	Measurement and Evaluation	Products				
										learning mode of the workshop. (Online)		diagnostic system normally.					
										3) Ask questions about role-play-based learning strategies. (Professional technical ability, self-development ability)		Learners can access learning materials.					

Evaluation list		A study activity plan for the first week.							Evaluation level					Suggestion	
		Learning time	Learning objective	Learning content (Analysis of the Recruitment Model of Employers)	Learning activity	Learning media	Measurement and Evaluation	Products	5	4	3	2	1		
					(Online)										

	Week1
Stage 4: Summary of	
<p>(Professional technical ability , interpersonal communication ability, ability to adjust emotions)</p>	<p>Teaching staff : Summarize the</p>
	WeChat and QQ
	<p>Task:Students will</p>

Evaluation list								Evaluation level					Suggestion							
A study activity plan for the first week.								5	4	3	2	1								
								Learning time		Learning objective	Learning content	Learning activity	Learning media	Measurement and Evaluation	Products					
								Lesson 3: 50 minutes			(Analysis of the Recruitment Model of Employers)		learning content for this week. Learners: Reflecting on the learning content of this week	learning groups- ; Employability Enhancement Workshop group	report on their learning achievements this week in groups and conduct a discussion activity on the					
											Learning Content (F2F)									

Evaluation list	A study activity plan for the first week.							Suggestion	
	Learning time	Learning objective	Learning content (Analysis of the Recruitment Model of Employers)	Learning activity	Learning media	Measurement and Evaluation	Products		5
									4
									3
									2
									1

Evaluation list	A study activity plan for the first week.							Suggestion					
	Learning time	Learning objective	Learning content (Analysis of the Recruitment Model of Employers)	Learning activity	Learning media	Measurement and Evaluation	Products		Evaluation level				
									5	4	3	2	1

Evaluation list							A study activity plan for the first week.					Evaluation level					Suggestion
							Learning time	Learning objective	Learning content (Analysis of the Recruitment Model of Employers)	Learning activity	Learning media	Measurement and Evaluation	Products	5	4	3	2
Week1 Lesson4: 50 minutes			Stage 5: Learning effectiveness test (F2F)	Week1 quiz : 1) Job Description (See attachment1) 2) Competency Quality List (See attachment 2)	WeChat and QQ learning groups- ; Employability Enhancement Workshop groups ;	All learners have completed the test	Personal competency model										

Evaluation list								Evaluation level				Suggestion			
A study activity plan for the first week.								5							
								4							
								3							
								2							
								1							
Learning time	Learning objective	Learning content (Analysis of the Recruitment Model of Employers)	Learning activity	Learning media	Measurement and Evaluation	Products									
				Test form											

More suggestions for teaching plan



Evaluation list	Plan learning activities for the second week.						Evaluation level				Suggestion	
	Learning time	Learning objective	Learning content (Learning job search goal decision-making)	Learning activity	Learning media	Measurement and Evaluation	Products	5	4	3		2
Week2	1. Explore whether learners have clear, stable, and self recognized job search goals or directions. 2. Enable learners to	Stage 1: Learn extracurricular content. (Online)	Teaching staff: 1) Release teaching courseware, videos, and other course related learning resources in advance through the Employability diagnostic system.	Employability diagnostic system, Computer, Smartphone, Tablet, Video, Sound, Picture	Learners reflect on the content learned each week.	Employability diagnostic system Background Learning Data Report						

Evaluation list	Plan learning activities for the second week.						Evaluation					Suggestion	
	Learning time	Learning objective	Learning content (Learning job search goal decision-making)	Learning activity	Learning media	Measurement and Evaluation	Products	level					
								5	4	3	2		1
Week2 Lesson 5: 50 minutes				decision-making through the employability diagnostic system. 2) Write a review diary.	Employability diagnostic system、	Classmates express their opinions together、							

Evaluation list	Plan learning activities for the second week.						Evaluation level				Suggestion		
	Learning time	Learning objective	Learning content (Learning job search goal decision-making)	Learning activity	Learning media	Measurement and Evaluation	Products	5	4	3		2	1
				<p>system courseware.</p> <p>(Professional technical ability, self-development ability)</p> <p>Learner: Prepare your smartphone and access the employability diagnostic system (Professional technical</p>	<p>Computer, Smartphone, Tablet, Video, Sound, Picture</p>								

Evaluation list	Plan learning activities for the second week.						Evaluation				Suggestion		
	Learning time	Learning objective	Learning content (Learning job search goal decision-making)	Learning activity	Learning media	Measurement and Evaluation	Products	level					
								5	4	3		2	1
			skills, self-development abilities)										

Evaluation list	Plan learning activities for the second week.						Evaluation				Suggestion		
	Learning time	Learning objective	Learning content (Learning job search goal decision-making)	Learning activity	Learning media	Measurement and Evaluation	Products	5	4	3		2	1



Evaluation list	Plan learning activities for the second week.							Evaluation					Suggestion
	Learning time	Learning objective	Learning content (Learning job search goal decision-making)	Learning activity	Learning media	Measurement and Evaluation	Products	level					
								5	4	3	2	1	
Week2 Lesson 5: 50 minutes Lesson 6: 50 minutes			Stage 3: Course learning schedule (F2F) 1) Decision status diagnosis 2) Career decision-making and career	-Linked to the activities of the first stage- Teaching staff (workshop practice activities): 1) Career opportunity incubation station. (job application ability, interpersonal communication	PPT、Video、Sound、Picture、Card、Paper、Color pen	All learners participated in the activity							

Evaluation list	Plan learning activities for the second week.						Evaluation level				Suggestion		
	Learning time	Learning objective	Learning content (Learning job search goal decision-making)	Learning activity	Learning media	Measurement and Evaluation	Products	5	4	3		2	1
			identification, clarifying personal career goals (Job search intentions) 3) Value Cost Analysis	ability, self-development ability) 2) The "quick question and answer method" and "construction method" (Interpersonal communication ability and emotional									

Evaluation list	Plan learning activities for the second week.						Evaluation level				Suggestion	
	Learning objective	Learning content (Learning job search goal decision-making)	Learning activity	Learning media	Measurement and Evaluation	Products	5	4	3	2		1
			<p>adjustment ability) of career choice values exploration.</p> <p>Learner (role-play-based learning activity): 1) Personal capital mining - life event interviews. (Interpersonal communication ability, self-</p>									

Evaluation list	Plan learning activities for the second week.						Evaluation				Suggestion		
	Learning time	Learning objective	Learning content (Learning job search goal decision-making)	Learning activity	Learning media	Measurement and Evaluation	Products	level					
								5	4	3		2	1
				development ability, emotional adjustment ability)									
				2) Clear decision-making strategies such as balance sheet/SWOT analysis. (Job application ability, self- development ability, emotional									

Evaluation list	Plan learning activities for the second week.						Evaluation level					Suggestion	
	Learning time	Learning objective	Learning content (Learning job search goal decision-making)	Learning activity	Learning media	Measurement and Evaluation	Products	5	4	3	2		1
				regulation ability)									
Week2			Stage 4: Summary of	Teaching staff : Summarize	WeChat and QQ	Task: 1) Students							

Evaluation list	Plan learning activities for the second week.							Evaluation					Suggestion
	Learning time	Learning objective	Learning content (Learning job search goal decision-making)	Learning activity	Learning media	Measurement and Evaluation	Products	level					
								5	4	3	2	1	
Lesson7: 50 minutes			Learning Content (F2F)	the learning content for this week. Learners: Reflecting on the learning content of this week	learning groups; ; Employability Enhancement Workshop groups	report their learning achievements for this week in small groups; 2) Carry out career counseling activities for job search goal							

Evaluation list	Plan learning activities for the second week.							Evaluation level				Suggestion	
	Learning time	Learning objective	Learning content (Learning job search goal decision-making)	Learning activity	Learning media	Measurement and Evaluation	Products	5	4	3	2		1
Week2 Lesson8: 50							decision-making in the form of a workshop to enhance employability						
			Stage 5: Learning Effectiveness Test	Week2 quiz: 3) Reference Table for	WeChat and QQ learning groups;	All learners have completed the test	Diagnosis and Evaluation						

Evaluation list	Plan learning activities for the second week.						Evaluation level				Suggestion		
	Learning time	Learning objective	Learning content (Learning job search goal decision-making)	Learning activity	Learning media	Measurement and Evaluation	Products	5	4	3		2	1
minutes			(Face to face)	Employability Diagnostic Dimensions(See attachment 3) 4)Career Decision Balance Sheet(See attachment	Employability Enhancement Workshop groups ; Test form		Model						

More suggestions for lesson plan



Evaluation list							Plan learning activities for the third week.				Evaluation level				Suggestion	
Learning time	Learning objective	Learning content (Job analysis of job objectives)	Learning activity	Learning media	Measurement and Evaluation	Products	5	4	3	2	1					
	their resumes using keywords for the target position. 3. Master how to write a work instruction manual.		the Employability diagnostic system. 2) Release learning task notifications in advance through the Employability diagnostic system.	Tablet, Video, Sound, Picture	content.	Data Report										

Evaluation list							Evaluation level	Suggestion
Learning time	Learning objective	Learning content (Job analysis of job objectives)	Learning activity	Learning media	Measurement and Evaluation	Products		
Plan learning activities for the third week.								
							5	
							4	
							3	
							2	
							1	
	4. Conduct industry analysis and cutting-edge tracking based on job analysis.		Learners: 1) Use the Employability diagnostic system to learn the theoretical content of job target job analysis and analysis;					
	5. Enable students							

Evaluation list							Evaluation level				Suggestion	
Plan learning activities for the third week.							5	4	3	2	1	
Learning time	Learning objective	Learning content (Job analysis of job objectives)	Learning activity	Learning media	Measurement and Evaluation	Products						
	to evaluate their understanding of the professional world around their personal job search goals.		2) Write a review diary.									

Evaluation list								Evaluation level	Suggestion
Learning time	Learning objective	Learning content (Job analysis of job objectives)	Learning activity	Learning media	Measurement and Evaluation	Products			
Week3 Lesson 9: 50 minutes		Stage 2: Preparing for classroom activities (Online)	Teaching staff: Prepare questions in the Employability diagnostic system courseware. (Professional technical ability, self-development ability)	Employability diagnostic system, Smartphone, Prize	The first to third winners receive the prize.		5 4 3 2 1		

Evaluation list	Plan learning activities for the third week.						Evaluation level	Suggestion
	Learning time	Learning objective	Learning content (Job analysis of job objectives)	Learning activity	Learning media	Measurement and Evaluation		
Week3 Lesson9: 50 minutes							5	
Lesson10: 50 minutes							4	
							3	
							2	
							1	

Evaluation list							Evaluation level	Suggestion
Learning time	Learning objective	Learning content (Job analysis of job objectives)	Learning activity	Learning media	Measurement and Evaluation	Products		
Plan learning activities for the third week.							5	
							4	
							3	
							2	
							1	

Evaluation list							Plan learning activities for the third week.				Evaluation level				Suggestion	
Learning time	Learning objective	Learning content (Job analysis of job objectives)	Learning activity	Learning media	Measurement and Evaluation	Products	5	4	3	2	1					
		Employers 8) Career Information Database Logic	2) Classification of competency cards. (Interpersonal communication ability, self-development ability, emotional adjustment ability)													

Evaluation list							Evaluation level	Suggestion
Learning time	Learning objective	Learning content (Job analysis of job objectives)	Learning activity	Learning media	Measurement and Evaluation	Products		
Week3 Lesson 11: 50 minutes		Stage 4: Summary of Learning Content (F2F)	Teaching staff : Summarize the learning content for this week. Learners: Reflecting on the learning content of this week	WeChat and QQ learning groups- ; Employability Enhancement Workshop groups	Task: 1) Students report their learning achievements for this week in small groups,		5 4 3 2 1	

Evaluation list	Plan learning activities for the third week.							Evaluation level	Suggestion
	Learning time	Learning objective	Learning content (Job analysis of job objectives)	Learning activity	Learning media	Measurement and Evaluation	Products		
								5	
								4	
								3	
								2	
								1	

Evaluation list							Evaluation level				Suggestion	
Plan learning activities for the third week.							5	4	3	2	1	
Learning time	Learning objective	Learning content (Job analysis of job objectives)	Learning activity	Learning media	Measurement and Evaluation	Products						
Week3 Lesson 12: 50					workshop enhance employability skills.							
		Stage 5: Learning Effectiveness Test	Week3 quiz: 5) List of Professional Values	WeChat and QQ learning groups-	All learners have completed the test	Personal job search goal						

Evaluation list								Evaluation level		Suggestion		
Plan learning activities for the third week.								5	4	3	2	1
Learning time	Learning objective	Learning content	Learning activity	Learning media	Measurement and Evaluation	Products						
minutes		(Job analysis of job objectives)										
		(F2F)	(See attachment 5)	Employability		decision-						
			6)Decision Status Comparison	Enhancement		making						
			Table (See attachment 6)	Workshop groups		model						
				Test form								

More suggestions for teaching plan

Evaluation list	Plan learning activities for the fourth week.							Evaluation level				Suggestion								
	Learning time	Learning objective	Learning content	Learning activity	Learning media	Measurement and Evaluation	Products	5	4	3	2		1							
								Week4	1.Learners have a certain understanding of how to write resumes. 2.Learners should master the screening	Stage 1: Learn extracurricular content. (Online)	Teaching staff: 1)Release teaching courseware, videos, and other course related learning resources in advance through the		Employability diagnostic system, Computer, Smartphone, Tablet, Video	Students reflect on what they have learned in the forum below the content every week.	Employability diagnostic systems Background Learning Data Report					

Evaluation list	Plan learning activities for the fourth week.						Evaluation level					Suggestion	
	Learning time	Learning objective	Learning content (Self marketing - resume coaching)	Learning activity	Learning media	Measurement and Evaluation	Products	5	4	3	2		1
			Learners: 1)Use the Employability diagnostic system to learn the theoretical content of resume coaching;										

Evaluation list	Plan learning activities for the fourth week.							Evaluation level				Suggestion			
	Learning time	Learning objective	Learning content (Self marketing - resume coaching)	Learning activity	Learning media	Measurement and Evaluation	Products	5	4	3	2		1		
			courseware. (Professional technical ability, self- development ability) Learner: Prepare your smartphone and access												

Evaluation list	Plan learning activities for the fourth week.							Evaluation level					Suggestion
	Learning time	Learning objective	Learning content (Self marketing - resume coaching)	Learning activity	Learning media	Measurement and Evaluation	Products	5	4	3	2	1	
								4	3	2	1		
								3	2	1			
								2	1				
								1					
Week4			theEmployability diagnostic system (Professional technical skills, self-development abilities)	PPT、 Video、 Sound、	All learners participated in the								
Lesson13: 50		Stage 3: Course learning schedule	Teaching staff (workshop practice)										

Evaluation list							Plan learning activities for the fourth week.					Evaluation level		Suggestion
							5	4	3	2	1			
Learning time	Learning objective	Learning content	Learning activity	Learning media	Measurement and Evaluation	Products								
minutes		(Self marketing - resume coaching)												
minutes		content	activities):	Picture、	activity。									
Lesson14: 50		(F2F)	1) Based on job	Card、 Paper、										
minutes		1)Elements of	descriptions and	Color pen										
		resume screening	personal capital											
		(1) -	information analysis;											
		professionalization	2) Write and optimize											
		2)Screening	targeted resumes.											

Evaluation list	Plan learning activities for the fourth week.						Evaluation level				Suggestion		
	Learning time	Learning objective	Learning content (Self marketing - resume coaching)	Learning activity	Learning media	Measurement and Evaluation	Products	5	4	3		2	1
			(4) - Other 5) Location of resume screening	ability) 2) Star principle exercise (Professional technical ability, interpersonal communication ability, self-development									

Evaluation list	Plan learning activities for the fourth week.							Evaluation level				Suggestion			
	Learning time	Learning objective	Learning content (Self marketing - resume coaching)	Learning activity	Learning media	Measurement and Evaluation	Products	5	4	3	2		1		
			ability, and emotional adjustment ability)	3) Pyramid Principle Exercise (Job application Ability, Professional Technical Ability)											

Evaluation list	Plan learning activities for the fourth week.							Evaluation level					Suggestion
	Learning time	Learning objective	Learning content (Self marketing - resume coaching)	Learning activity	Learning media	Measurement and Evaluation	Products	5	4	3	2	1	



Evaluation list	Plan learning activities for the fourth week.						Evaluation level					Suggestion	
	Learning time	Learning objective	Learning content	Learning activity	Learning media	Measurement and Evaluation	Products	5	4	3	2		1
Wee4Lesson15: 60 minutes		(Self marketing - resume coaching)	Stage 4: Summary of Learning Content (F2F)	Teaching staff : Summarize the learning content for this week. Learners: Reflecting on the learning content of this week	WeChat and QQ learning groups- ; Employability Enhancement Workshop groups	Task: 1) Students report their learning achievements for this week in small groups; 2) Submit a personal resume;	Personal resume						

Evaluation list	Plan learning activities for the fourth week.							Evaluation level					Suggestion
	Learning time	Learning objective	Learning content (Self marketing - resume coaching)	Learning activity	Learning media	Measurement and Evaluation	Products	5	4	3	2	1	
						3) Conducting a personal resume analysis and consultation activity in the form of a workshop to enhance employability skills,							

Evaluation list	Plan learning activities for the fourth week.						Evaluation level					Suggestion		
	Learning time	Learning objective	Learning content (Self marketing - resume coaching)	Learning activity	Learning media	Measurement and Evaluation	Products	5	4	3	2		1	
Week4 Lesson16: 50 minutes		Stage 5: Learning Effectiveness Test (F2F)	Week4 quiz: 7)Resume Checklist for Fresh Graduates(See attachment 7)	WeChat and QQ learning groups- ; Employability Enhancement Workshop groups ;	All learners have completed the test	Resume self- assessment model								

Evaluation list	Plan learning activities for the fourth week.						Evaluation level				Suggestion		
	Learning time	Learning objective	Learning content (Self marketing - resume coaching)	Learning activity	Learning media	Measurement and Evaluation	Products	5	4	3		2	1
							Test form						

More suggestions for lesson plan

Evaluation list							Plan learning activities for the fifth week.				Evaluation level				Suggestion
Learning time	Learning objective	Learning content (Self marketing - interview coaching)	Learning activity	Learning media	Measurement and Evaluation	Products	5	4	3	2	1				
Week5	1. Learners have a certain understanding of interview questions and forms. 2. Learners can	Stage 1: Learn extracurricular content. (Online)	Teaching staff: 1) Release teaching courseware, videos, and other course related learning resources in advance through Employability diagnostic	Employability diagnostic system、Computer、Smartphone、Tablet、Video、	Every week, students reflect on what they have learned in the forum below the content.	Employability diagnostic systemsBackg round Learning Data Report									

Evaluation list								Plan learning activities for the fifth week.					Evaluation level					Suggestion
Learning time	Learning objective	Learning content (Self marketing - interview coaching)	Learning activity	Learning media	Measurement and Evaluation	Products	Evaluation level					Suggestion						
							5	4	3	2	1							
	conduct scenario simulation interviews based on interview questions or case studies. 3. Learners can apply their		system. 2) Release learning task notifications in advance through the Employability diagnostic system. Learners: 1) Learn the theoretical content	Sound、Picture														

Evaluation list	Plan learning activities for the fifth week.						Evaluation level					Suggestion	
	Learning time	Learning objective	Learning content (Self marketing - interview coaching)	Learning activity	Learning media	Measurement and Evaluation	Products	5	4	3	2		1
			(Self marketing - interview coaching)	questions in the employability diagnostic system courseware. (Professional technical ability, self-development ability)	Computer, Telephone, Ipad, Video, Sound, PicturePrize								
			(Online)	Learner: Prepare your smartphone and									

Evaluation list	Plan learning activities for the fifth week.						Evaluation level					Suggestion									
	Learning time	Learning objective	Learning content (Self marketing - interview coaching)	Learning activity	Learning media	Measurement and Evaluation	Products	5	4	3	2		1								
											access the Employability diagnostic system (Professional technical skills, self-development abilities)										

Evaluation list								Evaluation level				Suggestion	
Plan learning activities for the fifth week.								5	4	3	2	1	
Learning time	Learning objective	Learning content	Learning activity	Learning media	Measurement and Evaluation	Products							
Week5 Lesson19: 50 minutes		(Self marketing - interview coaching) Stage 4: Summary of Learning Content (F2F)	Teaching staff : Summarize the learning content for this week. Learners: Reflecting on the learning content of this week	WeChat and QQ learning groups- ; Employability Enhancement Workshop groups ;	Task: 1) Students report their learning achievements for this week in small groups; 2) Students								

Evaluation list								Evaluation level				Suggestion	
Plan learning activities for the fifth week.								5	4	3	2	1	
Learning time	Learning objective	Learning content (Self marketing - interview coaching)	Learning activity	Learning media	Measurement and Evaluation	Products							
					participate in a job fair both on and off campus.								
					3) Conduct personal interview consultation								

Evaluation list								Evaluation					Suggestion	
								level						
								5	4	3	2	1		
Plan learning activities for the fifth week.														
Learning time	Learning objective	Learning content (Self marketing - interview coaching)	Learning activity	Learning media	Measurement and Evaluation	Products								
Week5 Lesson20:					activities in the form of a workshop to enhance employability									
					All learners have completed the test	Personal Comprehensive								

Evaluation list							Plan learning activities for the fifth week.					Evaluation level		Suggestion
							5	4	3	2	1			
Learning time	Learning objective	Learning content	Learning activity	Learning media	Measurement and Evaluation	Products								
50 minutes		(Self marketing - interview coaching)	interview questions (See attachment 8) 9) Competency and Achievement Event Checklist ((See attachment 9) 10) Comprehensive Quality Interview Evaluation Form (See attachment 10) 11) Semi structured interview	Employability Enhancement Workshop groups ; Test form		Quality Interview Model								

Evaluation list							Plan learning activities for the fifth week.					Evaluation		Suggestion
							Learning time	Learning objective	Learning content (Self marketing - interview coaching)	Learning activity	Learning media	Measurement and Evaluation	Products	
				questions (See attachment 11) 12) Common rating tables and scoring table for leaderless group discussions (See attachment 12)										

More suggestions for lesson plan

Evaluation list							Plan learning activities for the sixth week				Evaluation level		Suggestion
Learning time	Learning objective	Learning content	Learning activity	Learning media	Measurement and Evaluation	Products	5	4	3	2	1		
	class. 3. Objective: To explore learners' satisfaction with past learning activities.		application ability, professional technical ability, self-development ability, interpersonal communication ability, emotional regulation ability) 2) Allow learners to summarize the knowledge										

Evaluation list	Plan learning activities for the sixth week						Evaluation level				Suggestion		
	Learning time	Learning objective	Learning content	Learning activity	Learning media	Measurement and Evaluation	Products	5	4	3		2	1
				1)View weekly work results from the workshop learning record card. (job application ability, professional technical ability, self-development ability, interpersonal communication ability, and emotional									

Evaluation list							Evaluation level				Suggestion	
Plan learning activities for the sixth week							5	4	3	2	1	
Learning time	Learning objective	Learning content	Learning activity	Learning media	Measurement and Evaluation	Products						
			<p>regulation ability)</p> <p>2) Students submit written reports to report on their learning gains. (Job application ability, professional technical ability, self-development ability, interpersonal communication</p>									

Evaluation list	Plan learning activities for the sixth week							Evaluation level				Suggestion	
	Learning time	Learning objective	Learning content	Learning activity	Learning media	Measurement and Evaluation	Products	5	4	3	2		1
				ability, emotional regulation ability)									
Week6 Lesson22: 50 minutes			Stage 2: Learning Effectiveness Test (Online)	Allow students to take a job skills test and give them 50 minutes. (Job application ability, professional technical ability, self-development ability, interpersonal	Employment The teacher distributes online test papers in the classroom through the	All learners have Employability diagnostic systems Employability Test(Post-test)	Personal Employability diagnostic test report (after study)						

Evaluation list								Plan learning activities for the sixth week				Evaluation level				Suggestion		
Learning time		Learning objective		Learning content		Learning activity		Learning media		Measurement and Evaluation		Products		5	4	3	2	1
						<p>communication ability,</p> <p>emotional regulation ability)</p>		<p>employability</p> <p>diagnostic system</p>										
Week6 Lesson23: 50 minutes				<p>Stage 3: Feedback on learning outcomes (F2F)</p>		<p>Organize learners evaluate their learning satisfaction. (Job application ability, professional technical ability, self-development ability, interpersonal communication</p>		<p>Learning satisfaction evaluation mode, etc</p>		<p>All learners have completed the satisfaction test</p>		<p>Comparative analysis report on personal employability</p>						

Evaluation list							Evaluation level				Suggestion
Plan learning activities for the sixth week							5	4	3	2	
Learning time	Learning objective	Learning content	Learning activity	Learning media	Measurement and Evaluation	Products					
			ability, emotional regulation ability)								

More suggestions for lesson plan

Attachment list of lesson plan

Week1 quiz

1)Job Description (See attachment1)

Week1 quiz

1)Job Description (See attachment1)

2) Competency Quality List (See attachment 2)

Week2 quiz

3) Reference Table for Employability Diagnostic Dimensions(See attachment 3)

4)Career Decision Balance Sheet(See attachment 4)

Week3 quiz

5) List of Professional Values (See attachment 5)

6)Decision Status Comparison Table (See attachment 6)

Week4 quiz

7)Resume Checklist for Fresh Graduates(See attachment 7)

Week5 quiz

8) Collection and prediction of interview questions (See attachment 8)

9) Competency and Achievement Event Checklist ((See attachment 9)

10) Comprehensive Quality Interview Evaluation Form (See attachment 10)

11) Semi structured interview questions (See attachment 11)

12) Common rating tables and scoring table for leaderless group discussions (See attachment 12)

Attachment 1: Job Description

Job Description

(For 30 experimental group students)

Instruction: Evaluate students' understanding of the professional world based on their personal job search goals. Job analysis is the foundation for standing out in the job search process. Based on your feedback, please mark \checkmark in the blank space according to the following value list rating table to rate the list:

Evaluation list
Basic information of the position
Title
Reporting to superiors of positions
Position management subordinates
Work contact
Job responsibilities
Job Content and Activities
Work environment
Workplace
Working hours
Qualifications
Age requirements
Educational requirements
Professional requirements

Evaluation list
Basic information of the position
Work experience requirements
Knowledge required for work
Software, tools, etc. that need to be mastered in work
Qualification and Certification of Positions
Job related training
Worker Skills
Quality requirements
Other requirements
Worker characteristics
Vocational interest
Personality traits
Values
Treatment and Development
Salary (level)
Welfare
Career Development

More comments and suggestions

Attachment 2:Competency Quality List

Competency Quality List

(For 30 experimental group students)

Intructions:Guide students to clarify their personal values of choice; Confidence in one's ability to find the job one desires, that is, whether one believes that one can perform well in a series of job search processes such as resumes and interviews, and have the ability to solve difficulties encountered during the job search process.Based on your feedback, please mark \checkmark in the blank space according to the following value list rating table to rate the list:

Item			
Global views	Achievement oriented	Organizational commitment	Hardiness
Aggressiveness	Initiative	Action power	System construction
Troubleshooting	Attention to detail	Rapid response	Performance oriented
System optimization			
Market Orientation	Customer-centric	Interpersonal understanding	Interpersonal communication
People oriented	Openness to Experience	Service spirit	Empathy
Organizational Awareness	Relationship building	Ability to influence	Public relations ability
Language expression	Command	Appeal	Courage
Communication and coordination			
Analytical thinking	Inductive thinking	Systems Thinking	Frontline tracking
Information collection and analysis	Analysis and judgment	Learning development	Innovate
Market analysis			
Strategic thinking	leadership	Resource integration	Plan development
Identifying and Employing People	Incentive	Empower	Execute
Team Integration	Teamwork	Guidance and monitoring	Plan implementation
Developing Others			
Organizational identification	Specialization	Self-discipline	Self control
Honesty and integrity	Organized nature	Be dedicated	Responsibility
Emotional regulation	Optimistic	Introspection	Resilience and Adaptation
Note: Please refer to the above list of competency qualities and analyze your own competency qualities			

More comments and suggestions



Week2 quiz

Attachment3:Reference Table for Employability Diagnostic Dimensions

Reference Table for Employability Diagnostic Dimensions

(For 30 experimental group students)

Instruction: Measure employment intention and attitude towards job search, whether you will find employment or pursue higher education after graduation, whether job search is important to you, and whether you are willing to actively seek a job. (Including employment motivation and qualitative descriptive indicators such as emotions) . Based on your feedback, please mark $\sqrt{\quad}$ in the blank space according to the following value list rating table to rate the list:

Item		
Dimensionality	Operational definition	Detailed index
Goal identification	Clear, stable and accepted job objective/direction	1 Clear: can say the specific job objective or job direction 2 can accept: Based on self-exploration and career exploration; Be willing to make a commitment (decision/choice) 3 Be consistent: Your job objective will not change anytime soon
Human power is the foundation of confidence	Based on the past study and practice experience -KST, my opinion of what I can do in the future job market, and the evaluation of competitiveness in the job market - as the value of	1.Evaluate the usefulness of one's own experience and ability for future work; 2.Assess how your experience and skills stack up in the job market

Item		
Dimensionality	Operational definition	Detailed index
	the future workplace "human"	
Seek a sense of job effectiveness	Confidence in your ability to find a job that is right for you includes confidence in the outcome of your job search and a sense of control over the process. Adapted from a general sense of effectiveness, focusing on the general of job search process	Confidence in the outcome of a job search: A sense of control over job-seeking behavior based on confidence in one's ability to find a job: that efforts can solve problems and affect the outcome of a job search
The machine will dig	Use various channels and resources to obtain employment information related to the target position. Investigate the degree of initiative, investment and resource utilization in information collection behavior	<ol style="list-style-type: none"> 1. Know how to collect employment information - formal and informal sources, such as different network channels, parents, peers, teachers, friends 2. Use various resources to obtain information, show initiative and investment (proactive vs. passive, actively collect as much employment information as possible, spend a lot of time and energy) 3. Organize and evaluate the information obtained
Job search shows performance	Express yourself effectively in the resume and interview, and successfully obtain the position	<ol style="list-style-type: none"> 1 Know the key criteria for effective resume interview - job competency 2 Have you fulfilled these key criteria (have you prepared and studied accordingly, such as resume revision, interview simulation) <p>You know about the position. - Job description, competency.</p> <p>Knowledge of the organization -- corporate culture, history, organizational structure -- modify resumes based on that, develop interview questions, interview simulations</p>

Item		
Dimensionality	Operational definition	Detailed index
<ul style="list-style-type: none"> • Supervisory control • 	<p>I am able to make a job search plan, track and evaluate my job search progress, effect of job search activities and emotional state, and reflect and summarize experience. 【 Show some resilience 】</p>	<ol style="list-style-type: none"> 1. Create a job search plan 2.Document and track your job search 3. Reflection and Summary 4.Emotional regulation 5. Support Seeking 6.Job Search Effort - Focuses on the overall job search process evaluation
<p>Note:Please diagnose and analyze your employability based on the above evaluation sub dimensions</p>		

More comments and suggestions

Attachment4:Career Decision Balance Sheet

Career Decision Balance Sheet

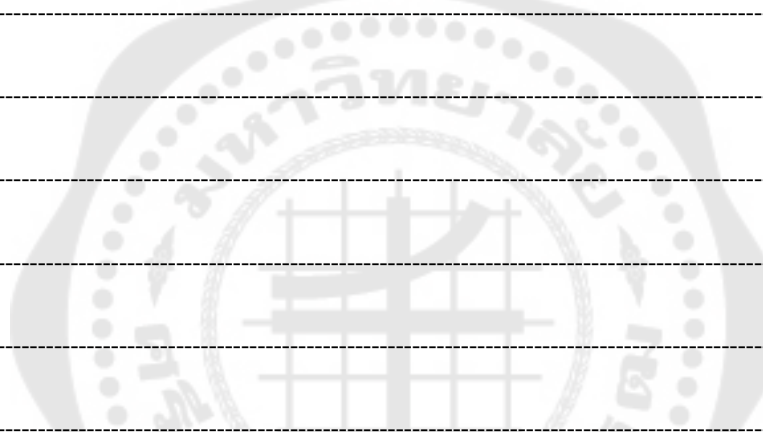
(For 30 experimental group students)

Instruction:: Guide them to evaluate the strengths, weaknesses, challenges, and opportunities of various opportunities; Based on one's current learning and practical experience, determine whether one has sufficient competitiveness in the job market and future workplace. Based on your feedback, please mark √ in the blank space according to the following value list rating table to rate the list:

Evaluation lists								
Weight	Options Consideration Core	O						
		+	-	+	-	+	-	+
Weight	Factor 1:							
	Factor 2:							
	Factor 3:							
	Factor 4:							
	Factor 5:							
	Factor 6:							
Score	Sum of scores in parentheses for each column							

	The difference in scores for each option				
Priority (highest score is '1')					
Note: Please conduct career goal decision-making analysis based on the below career decision balance sheet principle (Figure 1)					

More comments and suggestions



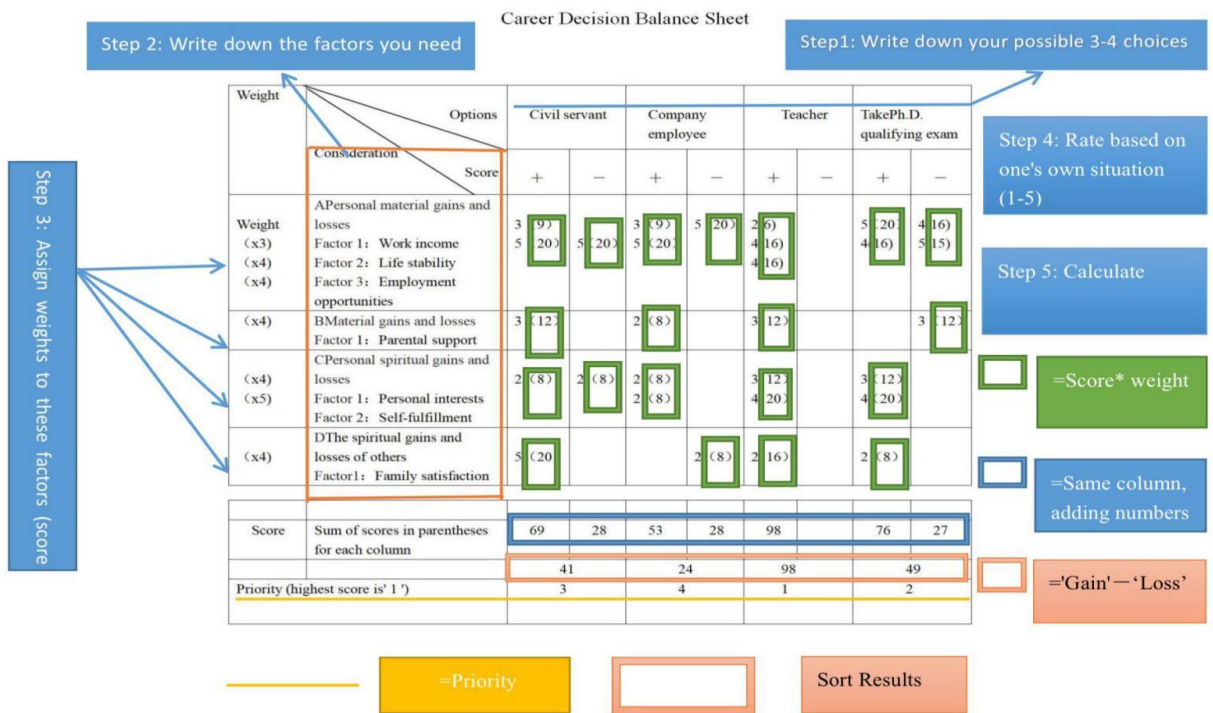
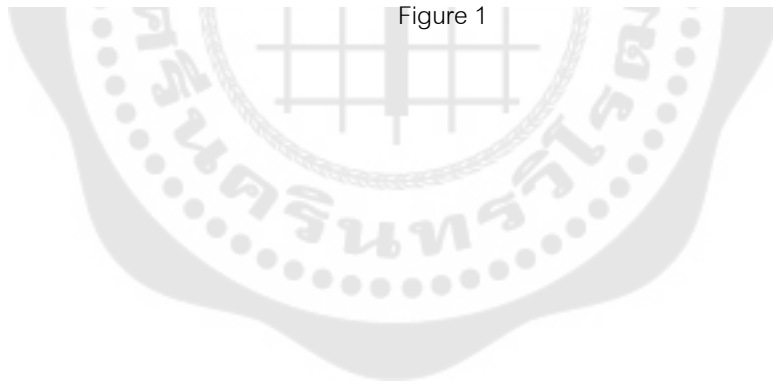


Figure 1

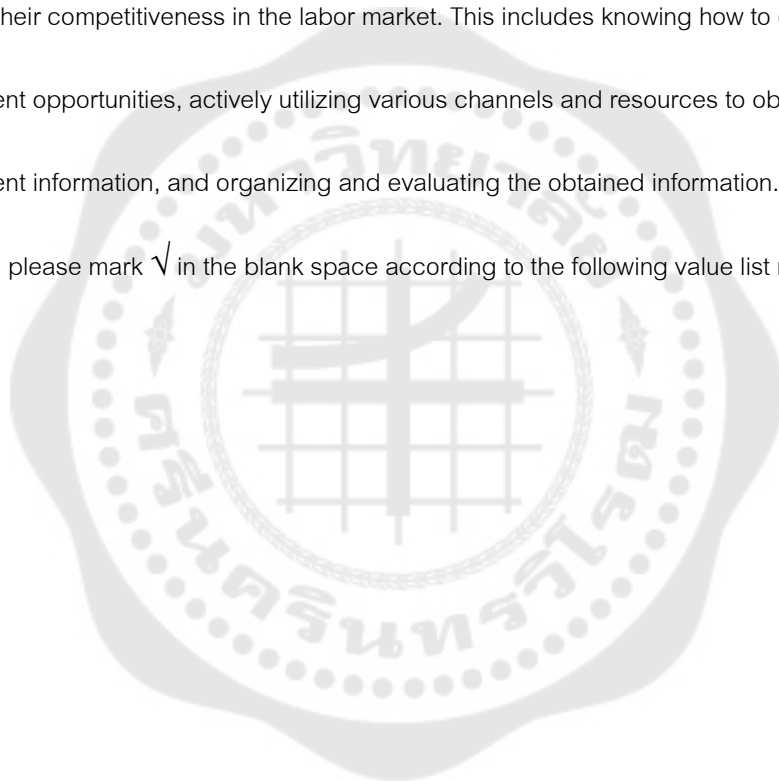


Week3 quiz**Attachment5:List of Professional Values**

List of Professional Values

(For 30 experimental group students)

Instruction:: Guide students to accumulate targeted human capital based on their own goals and enhance their competitiveness in the labor market. This includes knowing how to explore employment opportunities, actively utilizing various channels and resources to obtain desired employment information, and organizing and evaluating the obtained information. Based on your feedback, please mark ✓ in the blank space according to the following value list rating table to rate the list:



Item		
Category	Value Name	Value Name
Health protection	Personal safety	Adequate leisure time
Factor	High salary and good benefits	Simple and harmonious interpersonal relationships with colleagues and leaders
	Multiple sources of income	A relaxed work environment
	Stable operation	Conforming to tradition/beliefs
	Good working environment	There is a personal physical space
	The geographical location of the workplace is good	Meeting family needs or expectations
	Convenient and fast transportation	Not frequently traveling and working overtime
Development factors	Work content that aligns with interests and hobbies	Fast paced
	Competent	Adventure
	Able to unleash one's talents/expertise	Promotion Space/Promotion
	Equal job opportunities/fair competition	A job with aesthetic appeal
	Greater autonomy	Appreciation and recognition
	Provide opportunities for training/continuing education, etc	Rapid change
	The job content is somewhat	Working in cutting-edge fields

Item		
Category	Value Name	Value Name
	challenging	
	Not much work pressure	Opportunities for in-depth development
	The work content is not rich/monotonous	Development prospects
	Accurate/meticulous work	Innovate
Reputation and status factors	High visibility of the unit	Large unit scale
	High socioeconomic status	Unit in big cities
	Respectable	Being able to help others
	Right	Internationalization/Diversification
	Leadership	Supervision
	Beneficial to society	Make contributions to others

More comments and suggestions

Attachment6:Decision Status Comparison Table

Decision Status Comparison Table

(For 30 experimental group students)

Instruction:: Measure whether one has clear and stable career goals, which are made based on self understanding and career understanding, and are acceptable/recognized by oneself and will not be easily changed. Guide students to make independent decisions, rather than following the crowd; Autonomy is important. Based on your feedback, please mark \surd in the blank space according to the following value list rating table to rate the list:

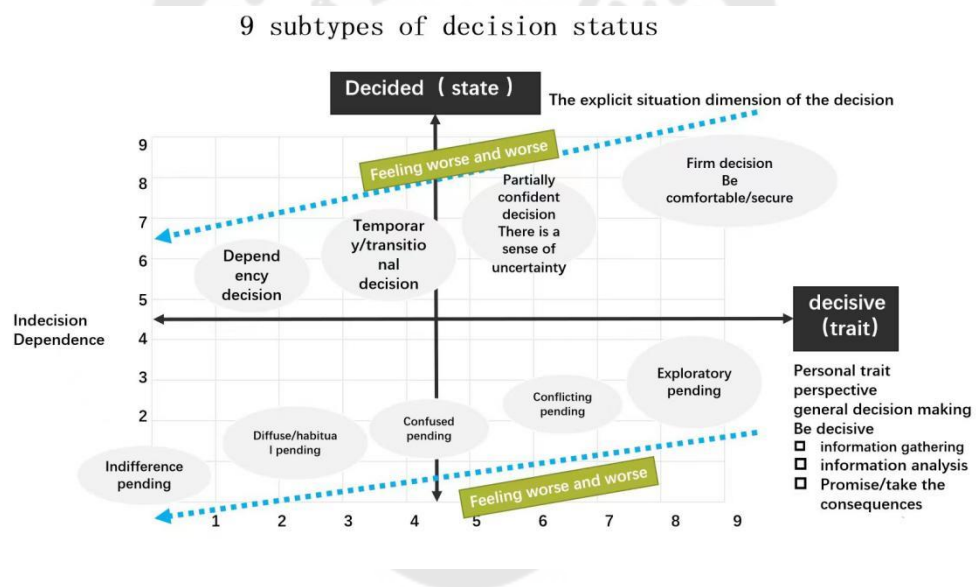


Figure2

Item	
Decision Item 1	Indifference pending
Decision Item 2	Diffuse/habitual pending
Decision Item 3	Confused pending
Decision Item 4	Conflicting pending
Decision Item5	Exploratory pending
Decision Item6	Firm decision Be comfortable/secure
Decision Item7	Partially confident decision There is a sense of uncertainty
Decision Item8	Temporary/transitional decision
Decision Item9	Dependency decision
Note:Please select the most suitable decision type based on the above decision status model and analyze the reasons(Figure2).	

More comments and suggestions

Week4 quiz

Attachment7:Resume Checklist for Fresh Graduates

Resume Checklist for Fresh Graduates

(For 30 experimental group students)

Intructions:Measure students' self-marketing ability, that is, whether they can effectively and accurately express themselves in resume writing, thereby successfully obtaining the expected position. Based on your feedback, please mark \checkmark in the blank space according to the following value list rating table to rate the list:

Note: Please base your answer on a resume you have already written. If you haven't written a resume yet, answer based on how you imagine it will look.

Evaluation lists			
Assessment question	Options		Score
1. At the beginning of my resume, I clearly state my job description so that HR can see it at a glance. (1point)	Yes	No	
2. In my resume, I only selected experiences and abilities that match the skills and positions I am applying for, rather than listing all experiences. (1point)	Yes	No	
3. I place the experience/ability most closely related to the job application at the front of my resume, rather than copying the resume template and filling in the corresponding content. (1point)	Yes	No	

Evaluation lists			
Assessment question	Options		Score
4. When describing an experience, I specifically describe what I have done and what achievements/achievements I have achieved, which is convenient for HR to judge my abilities. (1point)	Yes	No	
5. When describing experiences, I use a variety of keywords, rather than just using single repetitive verbs such as "participate... participate..." / "complete... complete...". (If you don't know what a key verb is, please choose 'no') (1point)	Yes	No	
6. I use numbers, relative numbers, etc. (such as the highest score among 49 people in the entire department) to quantify my achievements, so that HR can feel my abilities and level. (1point)	Yes	No	
7. If there are no examples/numbers to prove the self-evaluation section, I will not write this section. (1point)	Yes	No	
8. I believe that within 10 seconds, HR can learn from my resume about my abilities and advantages for the position I am applying for. (1point)	Yes	No	
9. My contact information (phone, email) should be clearly written at the beginning of my resume, making it convenient for HR to contact me. (1point)	Yes	No	
10. After completing my resume, I checked to ensure there were no typos, grammar,	Yes	No	

Evaluation lists			
Assessment question	Options		Score
formatting, or other errors. (1point)			
11.If it is necessary to include photos in my resume, I will include professional photos. (1point)	Yes	No	
12. My resume does not include the words' resume 'or' personal resume '. (1point)	Yes	No	
13. My resume layout (font, color) is concise and focused, without the school logo or colorful icons. (1point)	Yes	No	
14. The length of my resume reflects the word 'Jian', try not to exceed 1 page. (1point)	Yes	No	
15. When applying for different positions, I tailor my resume according to the requirements of the position. (1point)	Yes	No	
			Totally score
Note:Please tick the corresponding rating item based on the above options.			

More comments and suggestions

Week5 quiz

Attachment8:Collection and prediction of interview questions

Collection and prediction of interview questions

(For 30 experimental group students)

Intructions:Explanation: Measure whether students are able to collect and predict job interview questions based on target positions, personal competency items, job analysis, etc., and make sufficient preparations to obtain the expected position. Based on your feedback, please mark \checkmark in the blank space according to the following value list rating table to rate the list:

Part1:Please collect interview questions online based on the target position

Evaluation lists		
Serial Number	Interviewquestions	Source
1		
2		
3		
4		
5		
6		
7		
8		
9		
10		

Evaluation lists		
Serial Number	Interviewquestions	Source
Note:Please use the "6W" method to predict interview questions for the target position		

Part2:Please predict the interview question for a certain keyword based on the 6W method

Evaluation lists	
keyword	
Why	
What	
How	
When	
Where	
Who	

More comments and suggestions

Attachment9:Competency and Achievement Event Checklist

Competency Quality&Achievement Event Checklist

(For 30 experimental group students)

Intructions:Test whether students are able to develop job search plans, track and evaluate their job search progress, effectiveness of job search activities, emotional state, etc., reflect and summarize experiences, and adjust strategies to obtain the expected positions.Based on your feedback, please mark \surd in the blank space according to the following value list rating table to rate the list:



Evaluation list																
Achievement events	1	2	3	4	5	6	7	Quality item	1	2	3	4	5	6	7	Total
	1	2	3	4	5	6	7									
								TargetAction Team								
								1 Global views	1	Strategic thinking						
								2 Achievement oriented	2	Resource integration						
								3 Organizational commitment	3	Plan formulation and implementation						
								4 Hardiness	4	Identifying and Employing People						
								5 Performance oriented	5	Empower						

More comments and suggestions



Attachment10:Comprehensive Quality Interview Evaluation Form

Comprehensive quality interview evaluation form

(For 30 experimental group students)

Intructions: Measure students' self-marketing ability, that is, whether they can effectively and accurately express themselves in interviews, thereby successfully obtaining the expected position.

Based on one's current learning and practical experience, determine whether one has sufficient competitiveness in the job market and future workplace. Based on your feedback, please mark \surd in the blank space according to the following value list rating table to rate the list:

STAR principle

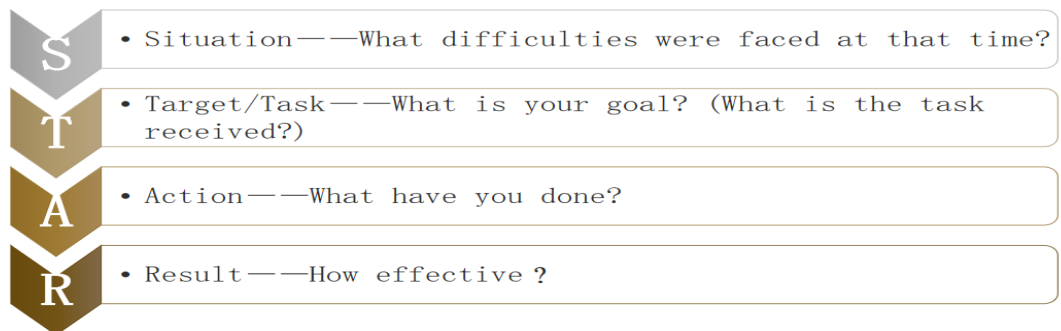


Figure3

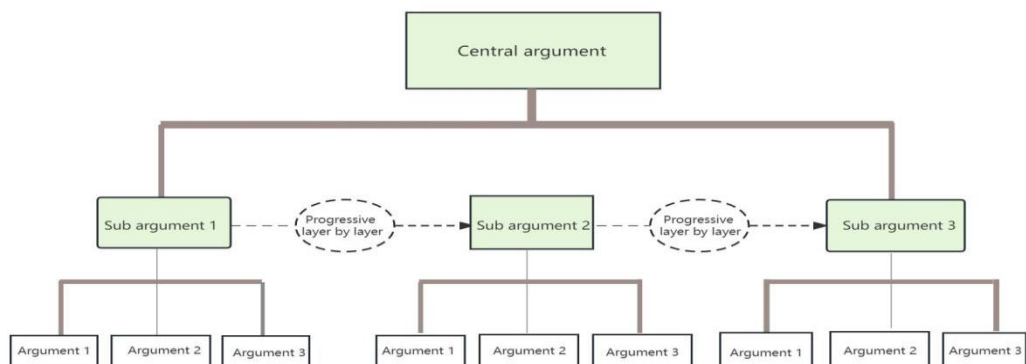


Figure4 Pyramid Principle

Evaluation lists							
Name	Gender	Education background	Graduate institutions	Major			
Evaluative feature	Image, Manners and Self-control (20 points)	Team/Communication, Presentation (25 points)	Initiative, achievement orientation (25 points)	Comprehensive ability (30points)			



<p>Evaluation criteria</p>	<p>Excellent</p>	<p>80-100: Natural, outstanding manners, appropriate dress, vivid and appropriate movement and body language outstanding appearance</p>	<p>80-100: Actively cooperate with others, appreciate and praise others, and win trust and respect by supporting others and cooperating with others. Show openness to others and value their opinions and talents. Be able to understand other people's thoughts quickly. Active expression, clear and fluent expression, good logic; Ability to think from the perspective of the whole team</p>	<p>80-100: Show some internal drive in the interview, narrative initiative. The case description demonstrates foresight, planning, and immediate action, a desire to outperform others, confidence in the face of challenges, and a sense of proportion, flexibility, and tolerance when appropriate.</p>	<p>80-100: Pay attention to the interviewer's movements and other details. I am able to grasp the key points of the topic, summarize and sort out the original and scattered information and opinions in the interaction, and make comprehensive analysis to enhance my own opinions and suggestions. Make a conscious effort to take notes, as well as draft and plan before answering questions; Make good final decisions</p>
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Evaluation lists							
Name		Gender	Education background	Graduate institutions	Major		
Good	<p>Image, Manners and Self-control (20 points)</p> <p>60-80: Be polite, nervous and young. Dress neatly and appropriately</p> <p>Plain looking</p>						
	<p>Evaluative feature</p>	<p>Team/Communication, Presentation (25 points)</p> <p>60-80: Listen carefully and record the main points of others' speech, able to explain, repeat and clarify the ideas and train of thought of others. Show some openness and use some body language. Able to</p>	<p>Initiative, achievement orientation (25 points)</p> <p>60-80: High expectations and evaluation of self, more agile performance, no cowering and delay tendency, more confident in the face of challenges, more active not tired to deal with</p>	<p>Comprehensive ability (30points)</p> <p>60-80: Answer and describe questions logically and clearly. Occasionally I miss some details because I'm nervous. Be able to cite or use analogies to illustrate problems, be able to record information and make a relatively correct final decision;</p>			

Evaluation lists							
Name	Gender	Education background	Graduate institutions	Major			
Evaluative feature	Image, Manners and Self-control (20 points)	Team/Communication, Presentation (25 points)			Initiative, achievement orientation (25 points)	Comprehensive ability (30points)	
		actively cater to others and cooperate with work Speak clearly and fluently with good logic Be able to bring yourself into the team and be part of the team			problems slightly less rigid, more flexible.		

Evaluation lists							
Name	Gender	Education background	Graduate institutions	Major			
Middle	Image, Manners and Self-control (20 points)	Team/Communication, Presentation (25 points)	Initiative, achievement orientation (25 points)	Comprehensive ability (30points)	40-60: To some extent, I focus more on myself than the group. My understanding ability is a little insufficient. My interview communication and case presentation are not smooth. The	40-60: The expectation and evaluation of self is not very high, showing some hesitancy, cowering and delaying tendency, not confident in the face of challenges, tired to cope with,	40-60: The content of the answer is less quoting information but just straight talk, does not pay special attention to the interviewer's actions and other details, notes and draft planning is sloppy and incomplete; The final decision made is relatively average;

Evaluation lists								
Name	Gender	Education background	Graduate institutions	Major				
Evaluative feature	Image, Manners and Self-control (20 points)	Team/Communication, Presentation (25 points)		Initiative, achievement orientation (25 points)	Comprehensive ability (30 points)			
	shape	logic of the speech is not very clear and concise, but it will not affect the information communication and expression ability. The logic is generally not team spirit, and the answer is	dealing with problems more rigid					

Evaluation lists									
Name	Gender	Education background	Graduate institutions	Major					
General		Image, Manners and Self-control (20 points)	Team/Communication, Presentation (25 points)	Initiative, achievement orientation (25 points)	Comprehensive ability (30points)				
		mainly "I"							
		20-40: Lack of proper manners, inappropriate dress, apathy, offensive	20-40: Overly self-focused, unable to accurately understand the meaning of the question, too simple or verbose description of the question, unwilling to	20-40: Average expectations for a successful interview, showing a tendency to be slow and avoidant. Unable to respond effectively to challenges and	20-40: Unable to effectively grasp the information in the questions and answers, ignoring some important requirements or contents, completely lacking the consciousness of recording and planning, and				

Evaluation lists							
Name	Gender	Education background	Graduate institutions	Major			
Evaluative feature	Image, Manners and Self-control (20 points)	Team/Communication, Presentation (25 points)		Initiative, achievement orientation (25 points)	Comprehensive ability (30points)		
	behavior and behavior marked by physical or physical defects	communicate, relatively closed and poor expression ability, no logic and no sense of team, mainly use "I" to answer	flustered in response to questions	unable to make a reasonable final decision due to the lack of information basis in the narrative			
Bad	0-20: Conspicuous	0-20: Self-centered or self-abashed-enclosed, difficult to	0-20: Displays indifference to the interview, inability to cooperate	0-20: Often misunderstand the questions and hints and instructions from the interviewer, fail			

Evaluation lists							
Name	Gender	Education background	Graduate institutions	Major			
Evaluative feature	Image, Manners and Self-control (20 points)	Team/Communication, Presentation (25 points)		Initiative, achievement orientation (25 points)	Comprehensive ability (30points)		
	facial and physical deficiencies that exhibit unreasonable, malicious,	understand the interviewer and interview questions, unable to accurately describe their own views and feelings, unable to describe the problem successfully and completely.	effectively in answering questions, signs of nervous breakdown or conflict under pressure, slow response time	to find effective information or recall cases to answer the questions, show carelessness or carelessness and fail to make a reasonable final decision			

Evaluation lists							
Name		Gender	Education background	Graduate institutions	Major		
Evaluative feature	Image, Manners and Self-control (20 points)		Team/Communication, Presentation (25 points)	Initiative, achievement orientation (25 points)	Comprehensive ability (30 points)		
	inappropriate, aggressive or uncooperative behavior		Poor expression ability, poor logic, lack of team spirit, mainly use "I" to answer				
<p>Note: Please organize a simulated interview (20 minutes) based on the above evaluation table, with each study group as the unit, using star principle and Pyramid Principle, selecting the job position and interview topic for each role.</p>							

Evaluation lists						
Name		Gender	Education background	Graduate institutions	Major	
Evaluative feature	Image, Manners and Self-control (20 points)	Team/Communication, Presentation (25 points)		Initiative, achievement orientation (25 points)		Comprehensive ability (30points)

More comments and suggestions

Attachment 11: Semi structured interview questions

Semi-structured interview questions

(For 30 experimental group students)

Intructions: Measure students' self-marketing ability and provide scoring references for students.

Measure students' self-marketing ability and provide scoring references for experts. Based on your feedback, please mark \surd in the blank space according to the following rating scale to rate the rating level:

There are 15 questions in three assessment dimensions:

Image and temperament, communication and expression, and logical thinking

Job Search Motivation and stability: 25 questions

File resistance and pressure resistance: 25 questions

Independent learning: 25 questions

Grade	Score	Behavioral indicator
Excellent	9-10	Strong scholar psychology, maintain high enthusiasm for new technologies and new fields, advocate continuous learning in the process of development, and constantly promote development in the process of learning; Constantly summarize experience, increase knowledge and improve skills; Be willing to experiment and share.
Preferably	6-8	Keep an eye on new knowledge, new technology and new field, and be willing to try new methods; Learning for pleasure, I am willing to ask others for advice about the problems I do not understand, and I am willing to share my experience. Periodic summary of the work; When the work content changes, take the initiative to make up for their lack of knowledge and skills; See work as an important learning process.
General	3-5	Can consciously learn some new knowledge, new skills, also can accept the training given by the enterprise; Be willing to ask your boss for advice on issues you don't understand; Often summarize some work experience and share moderately, believe that continuous learning is an important part of career.
Poor	0-2	Seldom take the initiative to learn new knowledge and new skills, and take a negative attitude towards the training given by the unit; Not willing to ask superiors or subordinates for advice on issues they don't understand; Rarely summarize their own experience; An unwillingness to share experiences with others.

More comments and suggestions

Definition: Having a strong curiosity and thirst for knowledge, actively increasing knowledge and improving skills through various ways and means, so as to obtain the ability for future development.

Interview questions

(For 30 experimental group students)

Intructions: Measure students' self-marketing ability and provide scoring references for students.

Measure students' self-marketing ability and provide scoring references for experts. Based on your feedback, please mark \checkmark in the blank space according to the following rating scale to rate the rating level:

Qusetions
1. What do you do when you encounter a problem at work that you haven't encountered before?
2."Most people are very curious and eager to learn when they are new to a job or task, but over time most of them see it as normal." What do you think of this sentence?
3.You've worked on a similar project with a mentor (or classmate) when you were at school. What do you do?
4.If you are unable to pursue a career related to your major after graduating from college, how will you make up for the possible shortfall?
5.What do you do when you are asked by colleagues (or peers) in the course of work?
6.At present, the market competition is fierce, the business of the department is slightly threatened by the peer, facing this situation, how will you do?
7.Superiors often require departments at all levels to constantly improve themselves and have a sense of crisis during their growth. What will you do if you are in charge of the department?
8.When you get together with your classmates/colleagues, they always talk about the latest gossip and cutting-edge information in the industry. What do you usually do?
9.The company has decided to issue an internal industry publication regularly for everyone to exchange experience, understand business related knowledge and news. Now we are seeking opinions from all departments and seeking responsible persons. What will you do about this?

Questions
10. Tell me about a part time (or internship) you had. What did you learn from it?
11. What have you done to prepare for this position?
12. What do you think you need to work on? Do you have a plan of action for that?
13. How do you plan to improve your professional knowledge and skills upon joining the company?
14. What do you think are the major issues facing our industry in the next ten years? How do you plan to deal with the changes ahead?
15. What goals did you set for your self-development in college? Why set such a goal?
16. Where do you see yourself in the next five years?
17. What do you do when your boss puts you in charge of drafting a project proposal but you've never done it before?
18. How would you understand and deal with your boss's criticism of the frequent errors in your department recently?
19. Recently, there are so many things going on in the company that you have a full schedule. However, your boss still requires you to think and summarize more often. How do you feel about this?
20. Tell me about a time when you learned a new skill. What motivated you to learn this skill in the first place?
21. The company has developed a new project, and you are selecting team members. You really want to join this project, but the leader thinks that your current knowledge and skills are insufficient. What will you do?
22. The company has introduced a new way of working and process, and is going to find two departments to pilot it. If you are the person in charge of one department, what will you do in this case?
23. Tell me about a time when you failed to complete a task. How did this experience affect you?
24. Due to manpower shortage, you were seconded to an unfamiliar product department. The product manager asked you to make a competitive product analysis report. How do you plan to carry out the work?
25. "In the company of three, there must be a teacher." Please give an example of how this statement has benefited you.

More comments and suggestions

Teamwork: 25 questions

Definition

Reasonable division of labor among team members, timely and effective communication,

support and cooperation with each other, form a team force, and jointly achieve the team goal

Grade	Score	Behavioral indicator
Excellent	9-10	Fully understand my role in the team, strong adaptability, able to find the best contribution to the team in the shortest time, adjust and assume the corresponding responsibilities; Build trust with your professional knowledge and quality; Excellent team communication and collaboration skills, can stimulate the team's strong cohesion, and jointly achieve the team goals; Strong sense of collective honor and responsibility; Proactively resolve team conflicts and protect/improve the reputation of the team in the eyes of outsiders.
Preferably	6-8	Clear my responsibilities and division of labor, play an important role in the team, and be able to make contributions to the team with my own expertise; Support and cooperate with each other as much as possible, and believe that the team is a collective full of fighting power and vitality; Be able to appreciate, trust and support the working partners, respect everyone's efforts for the team; Take the initiative to create an atmosphere of teamwork and advocate resolving conflicts and conflicts in an "open and honest" way.
General	3-5	Have a certain sense of teamwork, can cooperate well with team members; Realize that you are an indispensable member of the team and can take responsibility in your area. Good communication with team members, good cooperation with members, maintain a good atmosphere of team cooperation; I have a clear understanding of the team goals and put the interests of the team first.
Poor	0-2	The team cooperation consciousness is weak, the team goal is not clear, I am responsible for the task can not be timely completed; Not being open to partners, not being able to appreciate and trust others; I think I am an indispensable member of the team. I can't communicate with team members smoothly and cooperate with them tacit. Lack of collective responsibility, sense of honor.

More comments and suggestions

Interview question

Intructions: Measure students' self-marketing ability and provide scoring references for experts.

Measure students' self-marketing ability and provide scoring references for experts. Based on your feedback, please mark ✓ in the blank space according to the following rating scale to rate the rating level:

Questions
1.If you've just joined a team, what actions do you take to get yourself involved as quickly as possible?
2.It would have been relatively smooth to promote a project through teamwork, but I don't know what the superior thinks about adding another person, but he is not compatible with everyone. Then, as a leader, what will you do?
3.How do you feel about rewarding only one member of the team for a successful project you worked on?
4.What do you do when your department is given a very tedious task that must be completed by the company. Most people don't want to undertake it? What are the arguments in favor of your doing so?
5,What are your thoughts when team members disagree on a particular strategy and argue with each other? What do you do next?
6.What are the reasons for the success of the "Journey to the West" team? Which is the most important reason?
7.What kind of people do you like to work with? Why?

Questions
8.What kind of people do you like to work with? Why?
9.What kind of people do you like to work with? Why?
10.What do you think makes a good team player?
11.Describe your ideal team.
12.Do you think a person works more efficiently alone or in a team? Please state the reason.
13.Tell me about a time when you had a disagreement or conflict with someone. How did you resolve the disagreement?
14.There are several colleagues in your team who have very different personalities from you. How would you get along with them?
15.What do you think are the characteristics of a good team manager? Why?
16.What do you think are the characteristics of a good team manager? Why?
17.What do you do when your team meets a big obstacle in the process of developing a project together and everyone's morale is low?
18.Think about a time when you worked with others to complete a task. Tell me the most challenging thing you have ever encountered. How have you encouraged others and yourself to accomplish desired goals?
19.Your leader asks you to complete a project with two other colleagues, only to tell you the project objectives, acceptance criteria, and completion time, and then leaves. What do you do next?
20.Tell me about the most difficult thing you have ever encountered while working in a team. How did you solve the difficulty?
21.One colleague arrives at work an hour early every day, while others arrive a few minutes early. The leader praised his colleague at the regular meeting and encouraged everyone to learn from him. After the meeting, you found out there was a lot of criticism about your colleague. What do you think of that?
22.What do you do when you need another department to provide you with some important information, but the information they give you is not complete, and when you ask for it, they always delay for some reason?
23.What do you mean by "teamwork"? Please give an example.
24.When a colleague in your project team suddenly resigned, the human resources department could not recruit a suitable person in a short time, and other departments could not find someone to replace him. However, you are familiar with the work content of this colleague, what would you do?
25.What do you think is the difference between a good employee and a good team manager?
26.What kind of problems do you think "everyone cleans the snow on his own door, never mind the frost on

Questions
others' tiles" will bring to a team?
27.How would your good and bad classmates describe you? What do you think of their comments?
28.A colleague put forward an idea in the team discussion, which made your team exceed the expected target. The company praised your team leader and gave you a lot of bonus.

More comments and suggestions

Attachment12:Common rating tables and scoring table for leaderless group discussions (see attachment for details)

12.1 Common rating tables for leaderless group discussions

(For 30 experimental group students)

Instruction: Measures the scoring dimensions of students' self-marketing abilities as a reference, providing scoring references for students.Based on your feedback, please mark \checkmark in the blank space according to the following value list rating table to rate the list:

Evaluation list	
Common scoring dimensions	Typical behavioral manifestations
Thinking analysis ability: the general intelligence and cognitive ability level of an individual	<ol style="list-style-type: none"> 1. Accurately understand the question. 2. The viewpoint is novel and logically rigorous. 3. Drawing extensively from other sources.
Interpersonal communication skills	<ol style="list-style-type: none"> 1. Listen, be patient, and provide timely feedback to the speaker. Quickly understand and respond to others' statements. 2. Expression: Smooth; Highlight the key points; Skills. 3. Openness: Respect opposing viewpoints; Choose the good and follow it.
Stress response: Remain calm and act freely in stressful situations	<ol style="list-style-type: none"> 1. When conflicts arise with others' viewpoints, patiently and calmly explain. 2. Maintain a calm mood and actively express your opinions. 3. Make timely concessions.
Interpersonal influence: Individual perspectives can receive sufficient attention from group members and have a critical impact on the outcome of the discussion.	<ol style="list-style-type: none"> 1. Decisive: Leading the discussion process and having a critical impact. 2. Verbal influence: confident, infectious, and emotionally charged. 3. Proactively persuade those with different opinions to lead everyone's opinions towards consensus and make group decisions.
Organization and coordination ability	<ol style="list-style-type: none"> 1. Actively promote the progress of group discussions through repetition, summarization, suggestions, and other means. 2. Support and question the opinions of others, and mediate different opinions among members. 3. Advocate for a democratic and free speaking atmosphere. Pay attention to soliciting the opinions of other group members and encourage others to speak up. 4. Be friendly to others, respect their opinions, and make others feel happy and comfortable when talking to them, without a sense of distance.
Motivation for achievement	<ol style="list-style-type: none"> 1. Fully enter the discussion role and be able to consider issues from the perspective of the role. 2. Proactively express one's opinions. 3. The speech and behavior are full of vitality.

Evaluation list	
Common scoring dimensions	Typical behavioral manifestations
	4. Actively record others' speeches ◦
Note: Please conduct a leaderless group simulation interview based on the above scoring criteria, with each study group as a unit, and choose your own topic (30 minutes)	

More comments and suggestions

12.2 Leaderless group discussion exercise scoring table (0-10 points)

(For 30 experimental group students)

Instruction: Measures the scoring dimensions of students' self-marketing abilities as a reference, providing scoring references for students. Based on your feedback, please mark ✓ in the blank space according to the following value list rating table to rate the list:

Evaluation list							
Common scoring dimensions	Thinking analysis	Interpersonal communication	Stress response	Interpersonal influence	Organizational coordination	Motivation (achievement motivation)	Comment
Candidate 1							
Candidate2							
Candidate3							
Candidate4							
Candidate5							
Candidate6							
Candidate7							
Candidate8							
Candidate9							

Phase3

Appendix 5: Employability test form

This employability test is mainly divided into two parts

Part 1: Evaluation Criteria for employability test

Part 2: Employability test form

Part 1: Evaluation Criteria for employability test

An evaluation standard of achievement test on the use of role-play-based learning with workshop teaching model, by using employability diagnostic system to enhance employability skills for

undergraduate students in China

(For 30 experimental group students)

Instruction: This evaluation form is mainly used by students. First, content experts, evaluation experts and technical experts check the evaluation criteria, test scales, test content, test ability, test form, etc., to ensure the consistency of evaluation dimensions and research objectives. After obtaining expert permission, 30 students were asked to conduct self-assessment against the dimensions of employability assessment.

Note: Using an employability diagnostic system as the foundation for e-learning, the role-play-based learning combined with a workshop teaching model is used to test the effectiveness of students' employability skills. Eight performance tests were conducted based on eight factors that affect employment success and five teaching contents. The test evaluation includes the following eight

parts:

Eight factors that affect employment success	Five part teaching content
Part 1: About Employment Willingness Part 2: About Goal Identification Part 3: About Job Analysis Part 4: Confidence in Human Capital Part 5: About Opportunity Mining Part 6: Job Performance Part 7: Monitoring and Adjustment Part 8: Job search efficacy	Part1 : Analysis on the Recruitment Mode of Employers Part2 : Decision making of job objective Part3 : Job analysis of job objectives Part4 : Self marketing - resume coaching Part5 : Self marketing - interview coaching
The employability skills	
1.The ability to apply for a job, including career planning, collecting process information, interview skills and decision-making ability. 2.The professional and technical ability, including professional knowledge, technology and practical application ability. 3.The interpersonal communication ability, including communication ability, organization and coordination ability, team cooperation ability, conflict management ability and other relationship behavior management ability. 4.The self-development ability, including learning ability, ability to analyze and solve problems, innovation skills and other self improvement abilities. 5.The ability to regulate emotions, including social cognitive ability, self cognitive ability, self-management ability, and psychological adjustment ability, such as self-confidence, self-efficacy, achievement motivation, responsibility, perseverance, etc.	

For students, use the following evaluation criteria for scoring:

5 means that the evaluation dimension is very effective;

4 means that the evaluation dimension is effective;

3 means that the effectiveness of the evaluation dimension is

average;

2 means that the evaluation dimension is ineffective;

1 means the evaluation dimension has the lowest effectiveness

Dimension Table of Employment achievement test Evaluation

(For 50 experimental group students)

Evolution list						Evolution level				Suggestion
	Dimensional Interpretation	Teaching content	Test form	Testing Capability	Testing form	5	4	3	2	
Part 1: About Employment Willingness	Measure employment intention and attitude towards job search, whether you will find employment or pursue higher education after graduation, whether job hunting is important to you, and whether you	Part2: Decision making of job objective	Test form1: Nine squares of active and passive employment	Job application ability	(Multiple choice questions)					

Evaluation list	Evaluation level					Suggestion
	5	4	3	2		
Evaluation dimension	Dimensional Interpretation	Teaching content	Test form	Testing Capability	Testing form	
	are willing to take the initiative to find a job. (Including qualitative descriptive indicators such as employment motivation and emotions)					
Part 2: About Goal Identification	Measure whether one has clear and stable career goals, which are made based on self understanding	Part2: Decision making of job objective	Test form2: Student goal status and	Job application ability	(Single choice question)	

Evaluation list	Evaluation level					Suggestion
	5	4	3	2		
Evaluation dimension	Dimensional Interpretation	Teaching content	Test form	Testing Capability	Testing form	
	and career understanding, and are acceptable/recognized by oneself and will not be easily changed.		decision information testing			
Part 3: About Job Analysis	Assess students' understanding of the professional world based on their personal job search goals. Job analysis is the process of	Part3: Job analysis of job objectives	Test form3: Student Work Analysis	Job application ability	(Single choice)	

Evaluation list	Evaluation level						Suggestion
	5	4	3	2			
Dimensional Interpretation separating The foundation that stands out.							
Part 4: Confidence in Human Capital							
Teaching content Part2:Decision making of job objective							
Test form Specific Situation Test							
Testing Capability Ability to apply for a job and regulate emotions							
Testing form Student Performance in Capital Confidence							
Testing form (Single choice)							

Evaluation list	Evaluation level						Suggestion
	5	4	3	2			
Evaluation dimension	Dimensional Interpretation	Teaching content	Test form	Testing Capability	Testing form		
Part 5: About Opportunity Mining	This includes knowing how to explore employment opportunities, actively utilizing various channels and resources to obtain desired employment information, and organizing and evaluating the obtained information.	Part3: Job analysis of job objectives	Test scale 5: Testing of Students in Collecting Employment Information and Mining Opportunities	Interpersonal relationship and self-development abilities	(Single choice)		

Evolution list	Evolution level					Suggestion
	5	4	3	2		
Evolution dimension						
Part 6: Job Performance						
Dimensional Interpretation	Measure self marketing ability, that is, whether one can effectively express oneself in resumes and interviews, thereby successfully obtaining the expected position.					
Teaching content	Part4 : Self marketing - resume coaching					
Test form	Testform 6.1: Resume self-assessment ability evaluation					
Testing Capability	Job application ability, professional technical ability, interpersonal skills, self-development ability, and emotional regulation ability					
Testing form	(Single choice)					

Evaluation list	Dimensional Interpretation	Teaching content	Test form	Testing Capability	Testing form	Evaluation level				Suggestion
						5	4	3	2	
		Part5 : Self marketing - interview coaching	Test form 6.2:Self evaluation of interview ability	Job application ability, professional technical ability, interpersonal skills, self- development ability, and emotional regulation ability	(Single choice)					

Evaluation list	Evaluation level						Suggestion
	5	4	3	2			
Evaluation dimension							
Part 7: Monitoring and Adjustment							
Dimensional Interpretation							
Can you develop a job search plan, track and evaluate your job search progress, effectiveness of job search activities, emotional state, etc., reflect and summarize your experience, and adjust strategies to obtain the expected position.							
Teaching content							
Part 1: Analysis on the Recruitment Mode of Employers							
Test form							
Test form7: Analysis of the Specific Situation of Student Monitoring and Regulation							
Testing Capability							
Interpersonal relationship ability and emotional regulation ability							
Testing form							
(Single choice)							

Evaluation list	Evaluation level					Suggestion
	5	4	3	2		
Evaluation dimension						
Part 8: Job search efficacy	Dimensional Interpretation Confidence in one's ability to find the job one desires, that is, whether one believes that one can perform well in a series of job search processes such as resumes and interviews, and have the ability to solve difficulties	Teaching content Part 1: Analysis on the Recruitment Mode of Employers	Test form Test form 8: Specific analysis of students' job search validity	Testing Capability Interpersonal relationship ability, self-development ability, and emotional regulation ability	Testing form (Single choice)	

Evaluation list	Evaluation level						Suggestion
	5	4	3	2			
Evaluation dimension Dimensional Interpretation encountered during the job search process.				Teaching content Test form Testing Capability Testing form			

More comments and suggestions

Part 2: Employability test form

A series of Employability test on the use of role-play-based learning with workshop teaching model, by using employability diagnostic system to enhance employability skills for undergraduate students

in China

(For 30 experimental group students)

Instruction: This set of test forms is mainly designed for students to use. Content experts, evaluation experts and technical experts will first check the contents of the Employment achievement test series of scales to ensure that the contents of the Employment achievement test meet the research objectives, and then use them for 30 students in the experimental group after obtaining the permission of experts.

For students use the following meaning:

5 means very consistent

4 means compliance

3 means generally in line with

2 means non compliant

1 means very inconsistent

Part 1: About Employment Willingness

Specific Conditions of Students' Motivation for Active and Passive Employment

(For 30 experimental group students)

Instruction:: Measure whether one has clear and stable career goals, which are made based on self understanding and career understanding, and are acceptable/recognized by oneself and will not be

easily changed. Guide students to make independent decisions, rather than following the crowd;

Autonomy is important. Based on your feedback, please mark(√)in the blank space according to the

following value list rating table to rate the list:

For students use the following meaning:

5 means very consistent

4 means compliance

3 means generally in line with

2 means non compliant

1 means very inconsistent

Table 1 Specific Conditions of Students' Motivation for Active and Passive Employment

Employment willingness	Evaluation level					Suggestion
	5	4	3	2	1	
1.It doesn't matter to me whether I work or not.						
2. Entering the workplace is just like this, it's not worth my serious investment.						
3. If my family's financial conditions permit, I don't want to work						
4.I am looking for a job because I have nowhere to go after graduation and have to start looking for a job.						
5.I am looking for a job because I have nowhere to go after graduation and have to start looking for a job.						
6. The income after work can help my family share the pressure, so I am willing to work.						
7.After graduation, working can be financially independent, which attracts me.						

8. Even if I don't work, my family won't object, so I'm not in a hurry to find a job.						
9. I am not worried about employment because my family will help me arrange work.						
10. The process of finding a job is too complicated, I don't want to start at all.						
11. I really want to find employment and can't wait to test and prove my abilities.						
12. Work can create value for organizations and society, so I am willing to work.						
13. Work can help me achieve my life goals.						
14. The experience of the 14 job itself will be very interesting, and I am looking forward to it very much.						

More comments and suggestions

Part 2: About Goal Identification

Student goal status and decision information testing

(For 30 experimental group students)

Instruction: Measure whether one has clear and stable career goals, which are made based on self understanding and career understanding, and are acceptable/recognized by oneself and will not be easily changed. Guide students to make independent decisions, rather than following the crowd; Autonomy is important. Based on your feedback, please mark (✓) in the blank space according to the following value list rating table to rate the list:

For students use the following meaning:

5 means very consistent

4 means compliance

3 means generally in line with

2 means non compliant

1 means very inconsistent

2.1 Student performance in terms of target status

Employment goals	Evaluation level					Suggestion
	5	4	3	2	1	
1. There's no direction at all						
2. Having a general job search direction						
3. Able to articulate/write specific job objectives (rather than "IT" or "financial")						
4. Job search goals often change						
5. Others						

More comments and suggestions

2.2 Specific manifestations of students' decision-making information power

For students use the following meaning:

5 means very consistent

4 means compliance

3 means generally in line with

2 means non compliant

1 means very inconsistent

Information power	Evaluation level					Suggestion
	5	4	3	2	1	
1.Having carefully considered one's interests and preferences						
2.Seriously exploring one's own personality						
3.Carefully reviewed one's strengths and weaknesses						

Information power	Evaluation level					Suggestion
	5	4	3	2	1	
in terms of abilities						
4.Carefully analyzed the employment situation and policies						
5.Understanding potential employment opportunities through multiple channels						
6.Clarity individual criteria for making choices (i.e. professional values)						
7.Multidimensional comparison of various possible options						
8.Comprehensive collection of job information						
9.Ask Significant other for their opinions						
10.Get support from Significant other around you for your own decisions						
Note:Please tick the corresponding rating item based on the above options.						

More comments and suggestions

Part 3 Job Analysis

Student Work Analysis Specific Situation Test

(For 30 experimental group students)

Instruction: Evaluate students' understanding of the professional world based on their personal job search goals. Job analysis is the foundation for standing out in the job search process. Based on your feedback, please mark (✓) in the blank space according to the following value list rating table to rate the list:

For students use the following meaning:

5 means very consistent

4 means compliance

3 means generally in line with

2 means non compliant

1 means very inconsistent

Job Analysis	Evaluation level					Suggestion
	5	4	3	2	1	
1. Understand specific and official job titles						
2. Understand job responsibilities (not job content)						
3. Understand the job content						
4. Understand work relationships (superiors, subordinates, peers)						
5. Understand the mandatory job qualifications (such as education, major, certificate, etc.).						
6. Understand the required knowledge and skills.						
7. Understand soft employment standards (such as						

Job Analysis	Evaluation level					Suggestion
	5	4	3	2	1	
communication and coordination, innovation cooperation, etc.).						
8. Understand the salary range						
9. Understand the career development path and space.						
10. Can provide the name of the employer (i.e. representative organization) for the target position.)						
11. Clearly identify the industry to which the representative organization belongs.						
12. Clarify the position within the organizational human resources structure.						
13. Clearly understand the development trends of the industry and their impact on the position.						
14. Clarify the culture, values, vision of representative organizations, and their impact on target positions.						
15. Clarify the business operation models of representative organizations and their impact on target positions.						
16. Clearly understand the strategy and future development trends of representative organizations, as well as their impact on target orientation.						
Note: Please tick the corresponding rating item based on the above options.						

More comments and suggestions

Part four Human Capital Confidence

Student Performance in Capital Confidence

(For 30 experimental group students)

Instruction: Guide them to evaluate the strengths, weaknesses, challenges, and opportunities of various opportunities; Based on one's current learning and practical experience, determine whether one has sufficient competitiveness in the job market and future workplace. Based on your feedback, please mark (✓) in the blank space according to the following value list rating table to rate the list:

For students use the following meaning:

5 means very consistent

4 means compliance

3 means generally in line with

2 means non compliant

1 means very inconsistent

Student Performance in Capital Confidence

Human Capital Confidence - Specific Topic Analysis	Evaluation level					Suggestion
	5	4	3	2	1	
1. I am worried that my current level of knowledge and abilities may not be able to handle the job I am in (R)						
2. Compared to job seekers with higher visibility from my school, I am still competitive						
3. Education is an obstacle to achieving my job search goals (R)						
4. I lack relevant practical, part-time/internship experience, which greatly affects my job competitiveness. (R)						

Human Capital Confidence - Specific Topic Analysis	Evaluation level					Suggestion
	5	4	3	2	1	
5.The professional training in college has given me the confidence to adapt and survive in the workplace ◦						
6.A teacher or professional once commented on me and said, "This is a great worker ◦						
7.In the labor market where my target position is located, I believe that I am a sought after 'job'.						
Note:Please tick the corresponding rating item based on the above options.						

Explanation: R represents the question of reverse statement

More comments and suggestions

Part 5 Opportunity Mining

Testing of Students in Collecting Employment Information and Mining Opportunities

(For 30 experimental group students)

Instruction:Guide students to accumulate targeted human capital based on their own goals and enhance their competitiveness in the labor market. This includes knowing how to explore employment opportunities, actively utilizing various channels and resources to obtain desired employment information, and organizing and evaluating the obtained information. Based on your

feedback, please mark (✓) in the blank space according to the following value list rating table to rate

the list:

For students use the following meaning:

1 means very inconsistent

5 means very consistent

4 means compliance

3 means generally in line with

2 means non compliant

1 means very inconsistent

Employment information search/opportunity mining	Evaluation level					Suggestion
	5	4	3	2	1	
1.Overall, I don't know how to gather more employment/internship information. (R)						
2.I feel that my job opportunities are quite limited, which makes me anxious. (R)						
3.I feel that my job opportunities are quite limited, which makes me numerous (R)						
4.I only collect employment information through a single channel such as the internet or job fairs (R)						
5.I am able to extensively connect with teachers, friends, senior brothers, and sisters to gather job opportunities.						
6.I don't have enough time to search for job opportunities and obtain more employment information. (R)						
7.Apart from submitting a resume online, I will not proactively contact people to obtain more employment information or seek employment opportunities. (R)						

Employment information search/opportunity mining	Evaluation level					Suggestion
	5	4	3	2	1	
8.I know there are some channels for obtaining employment information, but for various reasons, I will not use these channels. (R)						
9.For me, the information provided by the school is sufficient.						
10.I believe that the current employment information/internship opportunity resources/information I have are sufficient.						

Explanation: R represents the question of reverse statement

More comments and suggestions

Part 6 Job Performance

6.1 Resume self-assessment ability evaluation

(For 30 experimental group students)

Intructions: Measure students' self-marketing ability, that is, whether they can effectively and accurately express themselves in resume writing, thereby successfully obtaining the expected position. Based on your feedback, please mark (√) in the blank space according to the following value list rating table to rate the list:

For students use the following meaning:

5 means very consistent

4 means compliance

3 means generally in line with

2 means non compliant

1 means very inconsistent

Student resume standards

Standards for resumes	Evaluation level					Suggestion
	5	4	3	2	1	
1. Based on a thorough analysis of one's target position						
2. The job application intention is very specific						
03. Professional format and style						
04. Professionalization of written expression						
05. Reflects the key verbs that must be followed for the target position						
6. There is sufficient evidence to prove one's abilities and advantages						
7. Priority display of key and targeted content						
8. Overall, I will be very satisfied with my resume						

More comments and suggestions

6.2 Self evaluation of interview ability

(For 30 experimental group students)

Intruction: Measure students' self-marketing ability, that is, whether they can effectively and accurately express themselves in interviews, thereby successfully obtaining the expected position.

Based on one's current learning and practical experience, determine whether one has sufficient competitiveness in the job market and future workplace. Based on your feedback, please mark \surd in the blank space according to the following value list rating table to rate the list:

For students use the following meaning:

5 means very consistent

4 means compliance

3 means generally in line with

2 means non compliant

1 means very inconsistent

Interview criteria	Evaluation level					Suggestion
	5	4	3	2	1	
1. Based on a thorough analysis of the target position						
2. Specific job application intentions						
3. Predict interview questions in advance						
4. Conduct interview drills in advance						
5. Professional attire						
6. Speak logically and clearly						
7. Professionalization of Etiquette						
8. Presented sufficient evidence to demonstrate capabilities and advantages						
9. Show Your Personality						
10. Overall, I am very confident in my (future) interview						

More comments and suggestions

Part 7: Monitoring and Adjustment

Analysis of the Specific Situation of Student Monitoring and Regulation

(For 30 experimental group students)

Intructions: Test whether students are able to develop job search plans, track and evaluate their job search progress, effectiveness of job search activities, emotional state, etc., reflect and summarize

experiences, and adjust strategies to obtain the expected positions. Based on your feedback, please

mark (✓) in the blank space according to the following value list rating table to rate the list:

For students use the following meaning:

5 means very consistent

4 means compliance

3 means generally in line with

2 means non compliant

1 means very inconsistent

Monitoring and regulation	Evaluation level					Suggestion
	5	4	3	2	1	
1. After each written test/interview, I am able to habitually review my performance and summarize my experiences and lessons.						
2. I am good at observing and absorbing good job search experiences from others, and applying them to my own job search process.						
3. If the job search is not successful, it will make me feel depressed for a long time. (R)						
4. When encountering difficulties during the job search process, I feel lost and at a loss what to do (R)						
5. If I fail my job search so many times, I will give up on myself. (R)						
6. I am able to plan and arrange various job hunting activities in advance.						
7. I will keep track and update my job application progress in a timely manner, so I have a clear understanding of the						

whereabouts of my resume ◦						
8.I am able to maintain a positive attitude throughout the job search process.						
9.If my job search is unsuccessful, my good friends or family can listen to me or give me encouragement.						

Explanation: R represents the question of reverse statement

More comments and suggestions

Part 8: Job search efficacy

Specific analysis of students' job search efficacy

(For 30 experimental group students)

Intructions:Guide students to clarify their personal values of choice; Confidence in one's ability to find the job one desires, that is, whether one believes that one can perform well in a series of job search processes such as resumes and interviews, and have the ability to solve difficulties encountered during the job search process.Based on your feedback, please mark (√)in the blank space according to the following value list rating table to rate the list:

For students use the following meaning:

5 means very consistent

4 means compliance

3 means generally in line with

2 means non compliant

1 means very inconsistent

Job search efficacy	Evaluation level					Suggestion
	5	4	3	2	1	
1.I believe I can get the job I want ◦						
2.I think in the end, I can get multiple satisfactory offers (more than 1)						
3.If I try my best, I will definitely be able to solve the problems encountered during the job search process.						
4.If I encounter setbacks during the job search process, I am worried that I will not be able to adhere to my job search goals (R)						

Explanation: R represents the question of reverse statement

More comments and suggestions

Appendix 6: Student Satisfaction Survey

A student satisfaction survey on the use of role-play-based learning with workshop teaching model, by using employability diagnostic system to enhance employability skills for undergraduate students in China

(For 30 experimental group students)

Instruction: Mainly aimed at students. Firstly, the evaluation expert will inspect the content of the student satisfaction survey to ensure that the satisfaction project aligns with the research objectives. After obtaining expert permission, organize students to rate the satisfaction content project. Based on the role-play-based learning and workshop teaching model, questionnaires, feedback, and learning satisfaction are used. Employability diagnostic system was used as the foundation of electronic learning, providing thinking for the employability skills of undergraduate students in Chinese higher education institutions.

The questionnaire consists of three parts:

Part 1: General information of respondents in the survey questionnaire, ask them to fill in or mark the fields that best match your true situation.

Part 2: Learning feedback and satisfaction survey on role-play-based learning with workshop teaching model, by using employability diagnostic system to enhance employability skills, and assesses standard issues. The respondents to the questionnaire will mark (✓) them as the cells that best match their evaluation, and the evaluation criteria are as follows:

For students:use the following meaning

5 means having the highest satisfaction

4 means having the higher satisfaction ;

3 means having the general satisfaction;

2 means having the low satisfaction;

1 means having the lowest satisfaction.

Part 3: Proposes learning suggestions to improve the role-play-based learning with workshop teaching model, by using employability diagnostic system to enhance employability skills .Ask respondents to fill out a comment and provide feedback that best fits their reality.

Part 1: General Information of Questionnaire Respondents

Clarification: The evaluator fills in or marks(√) the fields that best match your reality.

Evaluation list

Question

1. Gender

2. Age

3. The major you are studying:

4. Grade you are studying:

5.What device do you use for pattern learning activities?

(1) Smartphones

(2) Tablets

(3) Desktops

(4)Laptops (such as notebooks, laptops, macbook air, etc.)

Evaluation list**Question**

6. What time did you use in extracurricular learning activities?

- (1) Time range from 9:00 to 12:00
- (2) Time range from 1pm to 3pm
- (3) The time is from 6pm to 6pm.
- (4) Time from 7:00 pm to 9:00 pm
- (5) Time range from 22.00 to 24.00
- (6) Time starting from 1am

7. What positions did you use in extracurricular learning activities?

- (1) Family/Residence
- (2) School
- (3) Online Shop
- (4) Coffee Shop/Restaurant/Co Working Space
- (5) Other

Part2: To conduct satisfaction survey on role-play-based learning with workshop teaching model, by using employability diagnostic system to enhance employability skills .

Instruction: Have the respondents in the questionnaire mark (√)the areas that best align with their views.

(For 30 experimental group students)

Evaluation list	Evaluation or satisfaction level					Suggestion
	5	4	3	2	1	
Item						
1.Teaching staff and learners						
1.1 The teaching staff explained and clarified the learning mode to the students.						
1.2The ability of teachers to organize						

Evaluation list	Evaluation or satisfaction level					Suggestion
	5	4	3	2	1	
Item						
classroom teaching activities						
1.3The ability of teachers to organize extracurricular teaching activities.						
1.4 Teachers create opportunities to encourage students to express their opinions, exchange ideas, and learn with students from different cultures or regions.						
1.5 This teaching method hold a positive attitude towards people from different cultures.						
1.6 Students are able to conduct rational analysis, distinguish and evaluate based on reliable data.						
1.7 The method of solving problems can make students more insightful,						
1.8 Problem solving methods can provide students with more insight.						
2.The process of organizing teaching activities						
2.1 Teaching stage(lecturesearch)						
2.2 Preparation stage for classroom activities.						
2.3 Workshop exchange activities (employment consultation)						
2.4 Case analysis (scenario simulation)						
2.5 Employment Capacity Enhancement Plan						
2.6 Brainstorming stage (workshop						

Evaluation list	Evaluation or satisfaction level					Suggestion
	5	4	3	2	1	
Item						
activity)						
2.7 Propose solutions in stages (workshop activity)						
3.Learning environment (environment)						
3.1 Availability of technical equipment and materials supporting internet learning						
3.2 Access learning materials anytime and anywhere using various electronic devices on the internet.						
3.3 Provide a classroom atmosphere conducive to electronic learning, such as having each learner share a job interview case using the Employability diagnostic system.						
3.4 Provide interesting and diverse learning courses in the classroom and encourage students to participate in activities.						
3.5 Encourage learners to think about enhancing their employability in an electronic learning environment, both internally and externally.						
4.In terms of learning support tools in the Employability diagnostic system.						
4.1 Students can use the Employability diagnostic system.						
4.2 Convenient communication for students on the Employability diagnostic system.						

Evaluation list	Evaluation or satisfaction level					Suggestion
	5	4	3	2	1	
Item						
4.3 The convenience of using learning support tools (such as WeChat, QQ learning groups, ZOOM, Tencent conferences, etc.) in Employability diagnostic systems						
4.4 Use the Employability diagnostic systemsm learning support Tool to encourage students to think about improving their employability and consider sources of reliability.						
4.5 Utilize workshop learning activities to encourage students to learn and understand different cultures, and have a positive impact on people from different cultures.						
5.Evaluation aspect (eval)						
5.1 Use games or Q&A, group discussions, and other activities to evaluate the results of extracurricular learning.						
5.2 The weekly assignments are consistent with the course content.						
5.3 Learning evaluation in the theoretical and practical fields.						
5.4 Conduct employability assessments before and after class.						

In summary, to what extent do students believe that role-play-based learning with workshop teaching model,,by using employability diagnostic system to promotes employability improvement and meets students' needs?

At most is very good. Medium Less Min

Part 3: Suggestions for improve the role-play-based learning with workshop teaching model, by using employability diagnostic system to enhance employability skills .

Clarification:Ask the respondents in the questionnaire to express their opinions and provide feedback that best fits your reality.

Thank you to all the students who participated in this survey.

PhaseIV

Appendix7:The form confirm evaluation of role-play-based learning with workshop teaching model

An evaluation on confirmation the form of role-play-based learning with workshop teaching model, by using employability diagnostic system to enhance employability skills

for undergraduate students in China

(For five experts)

Instruction:This form mainly used for 5 experts.to explore the views of five qualified experts on role-play-based learning with workshop teaching model form, by using employability diagnostic system to enhance employability skills .

Experts use the meaning:

5 means the most appropriate,

4 means very appropriate,

3 means appropriate,

2 means inappropriate,

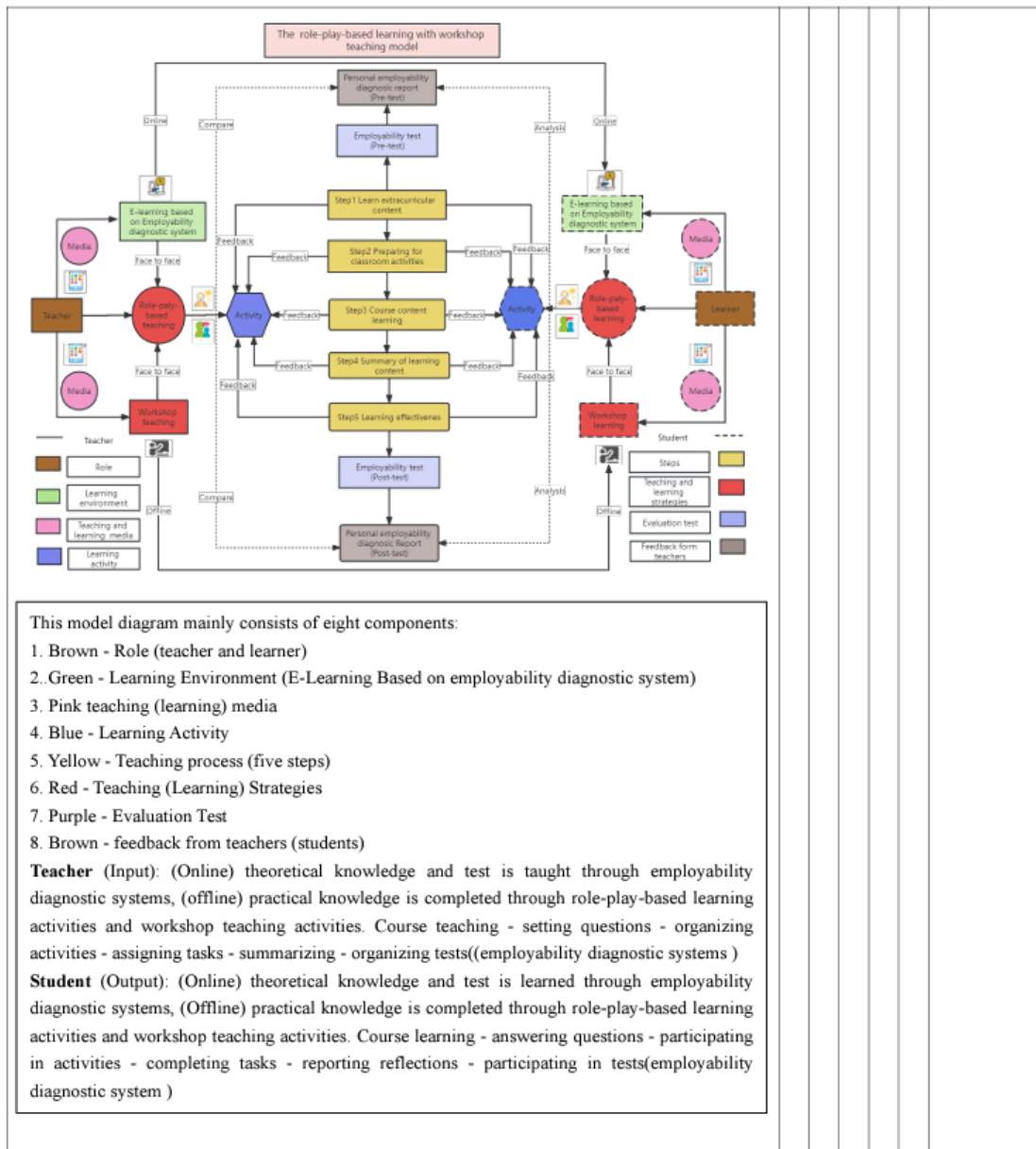
1 means very inappropriate.

It divided into two parts

Part1.The appropriate of graphic model

Instruction:Please check in the words that related to your opinion.





More comments and suggestions

Part2 : Evaluation on confirmation the form of role-play-based learning with workshop teaching

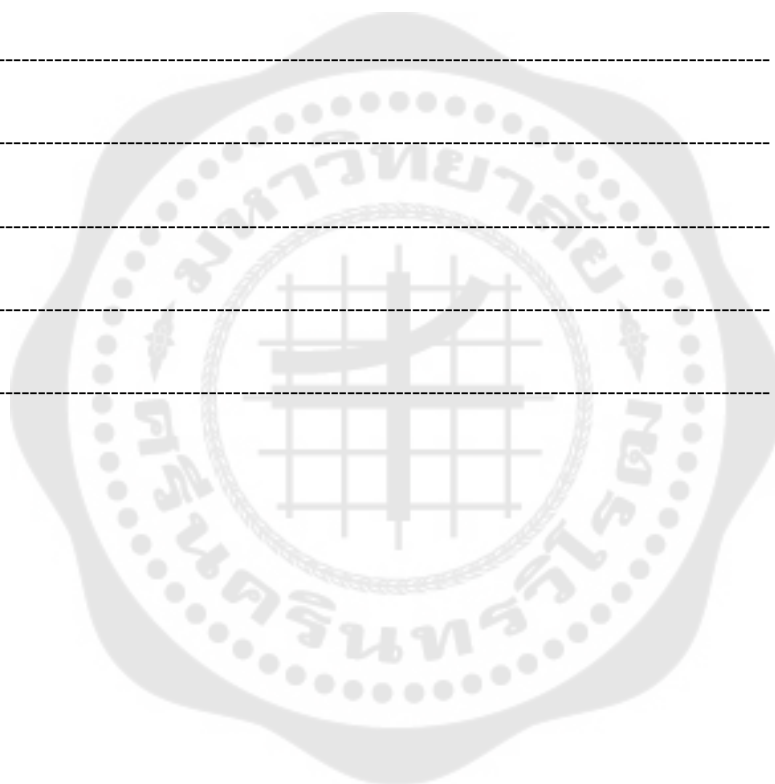
model, by using employability diagnostic system to enhance employability skills

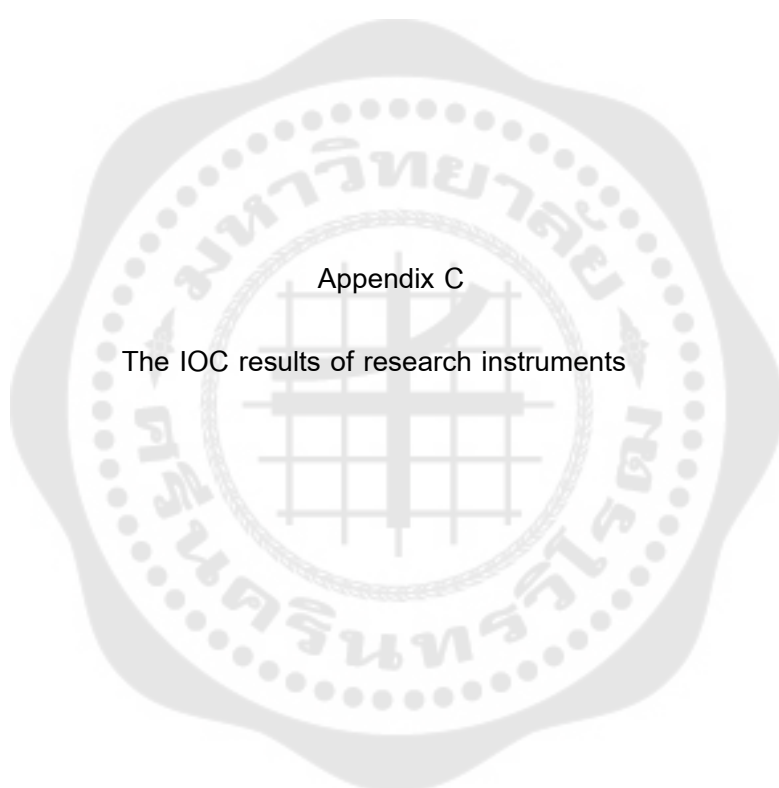
Evaluation list	Evaluation level					Suggestion
	5	4	3	2	1	
Item						
1. The components of role-play-based learning and workshop teaching model						
1.1 The roles used in the model are comprehensive.						
1.2 The learning environment of the model can support the improvement of employability skills.						
1.3 The teaching media used in the model is suitable for the teaching content and characteristics of teaching activities.						
1.4 Designing learning activities using role-play-based learning strategies and workshop teaching methods can support employability enhancement.						
1.5 The teaching process of the mode is complete and appropriate.						
1.6 The selection of teaching theories should be consistent with the learning content.						
1.7 Model evaluation testing corresponds to teaching content, teaching process, and teaching objectives.						
1.8 The feedback section of the model is closely combined with the improvement of employability to arrange learning tasks.						
2. The processs of the role-play-based learning and workshop teaching model						
2.1 Stage 1: Learn extracurricular content.						
2.2 Stage 2: Preparing for classroom activities.						
2.3 Stage 3: Course learning schedule content.						
2.4 Stage 4: Summary of learning content						
2.5 Stage 5: Learning effectiveness test						
3. The media of the role-play-based learning and workshop						

Evaluation list	Evaluation level					Suggestion
	5	4	3	2	1	
Item						
teaching model						
3.1 The media used in the model can support role-play-based learning combined with workshop teaching activities.						
3.2 The media used in the model is suitable for use in role-play-based learning combined with workshop teaching model.						
3.3 The media used in the model can enhance role-play-based learning activities.						
3.4 The media used in the model can enhance students' employability skills.						
3.5 The media used in the model is suitable for practical courses on employability technology.						
4. The technology of the role-play-based learning and workshop teaching model						
4.1 The techniques used in the model are suitable for use in role-play-based learning combined with workshop teaching model.						
4.2 The techniques used in the model can enhance the effectiveness of learning activities.						
4.3 The technology used in the model can support the improvement of employability skills.						
4.4 The technology used in the model is applicable to courses related to employability guidance.						
5. Overall the model.						
5.1. The components of role-play-based learning and workshop teaching model.						
5.2 The process of role-play-based learning with workshop teaching model.						
5.3 The learning activities of role-play-based learning with workshop teaching model.						

Evaluation list	Evaluation level					Suggestion
	5	4	3	2	1	
Item						
5.4The instruments of role-play-based learning and workshop teaching model.						
5.5The evaluation of role-play-based learning with workshop teaching model.						

More comments and suggestions





Appendix C

The IOC results of research instruments

Table 7 The IOC results of survey questionnaire

A survey questionnaire on the current development status and student needs of role-play-based learning with workshop teaching model, by using employability diagnostic system to enhance employability skills for undergraduate students in China

Part 1: Survey the basic information of the respondents in the questionnaire,

Item	Expert			IOC	Results
	1	2	3		
Part1					
1.					
1.1	+1	+1	+1	1.00	Agree
1.2	+1	+1	+1	1.00	Agree
1.3	+1	+1	+1	1.00	Agree
1.4	+1	+1	+1	1.00	Agree
1.5	+1	+1	+1	1.00	Agree
2.	+1	+1	+1	1.00	Agree
3.	+1	+1	+1	1.00	Agree
Part2					
1.					
1.1	+1	+1	+1	1.00	Agree
1.2	+1	+1	+1	1.00	Agree
1.3	+1	+1	+1	1.00	Agree
2.					
2.1	+1	+1	+1	1.00	Agree
2.2	+1	+1	+1	1.00	Agree
2.3	+1	+1	+1	1.00	Agree
2.4	+1	+1	+1	1.00	Agree

3.					
3.1	+1	+1	+1	1.00	Agree
3.2	+1	+1	+1	1.00	Agree

Part3

1.					
1.2	+1	+1	+1	1.00	Agree
1.3	+1	+1	+1	1.00	Agree
1.4	+1	+1	+1	1.00	Agree
1.5	+1	+1	+1	1.00	Agree
1.6	+1	+1	+1	1.00	Agree
1.7	+1	+1	+1	1.00	Agree
1.8	+1	+1	+1	1.00	Agree
1.9	+1	+1	+1	1.00	Agree
2.0	+1	+1	+1	1.00	Agree
2.					
2.1	+1	+1	+1	1.00	Agree
2.2	+1	+1	+1		
2.2	+1	+1	+1	1.00	Agree
3.					
3.1	+1	+1	+1	1.00	Agree
3.2	+1	+1	+1	1.00	Agree
3.3	+1	+1	+1	1.00	Agree
3.4	+1	+1	+1	1.00	Agree
3.5	+1	+1	+1	1.00	Agree

Part4

1.					
1.1	+1	+1	+1	1.00	Agree
1.2	+1	+1	+1	1.00	Agree
1.3	+1	0	+1	0.67	Agree
1.4	+1	+1	+1	1.00	Agree
1.5	+1	+1	+1	1.00	Agree

2.					
2.1	+1	+1	+1	1.00	Agree
2.2	+1	+1	+1	1.00	Agree
2.3	+1	+1	+1	1.00	Agree
2.4	+1	+1	+1	1.00	Agree
2.5	+1	+1	+1	1.00	Agree
2.6	+1	+1	+1	1.00	Agree
2.7	+1	+1	+1	1.00	Agree
3.					
3.1	+1	+1	+1	1.00	Agree
3.2	+1	+1	+1	1.00	Agree
3.3	+1	+1	+1	1.00	Agree
3.4	+1	+1	+1	1.00	Agree
3.5	+1	+1	+1	1.00	Agree
4.					
4.1	+1	+1	+1	1.00	Agree
4.2	+1	+1	+1	1.00	Agree
4.3	+1	0	+1	0.67	Agree
4.4	+1	+1	+1	1.00	Agree
4.5	+1	+1	+1	1.00	Agree
5.					
5.1	+1	+1	+1	1.00	Agree
5.2	+1	+1	+1	1.00	Agree

Table8 The IOC results of Semi structured interviews

Item	Expert			IOC	Results
	1	2	3		
Part1					
1.	+1	+1	+1	1.00	Agree
2.	+1	+1	+1	1.00	Agree
3.	+1	+1	+1	1.00	Agree
4.	+1	+1	+1	1.00	Agree
Part2					
1.					
1.1	+1	+1	+1	1.00	Agree
1.2	+1	+1	+1	1.00	Agree
1.3	+1	+1	+1	1.00	Agree
2.					
2.1	+1	+1	+1	1.00	Agree
2.2	+1	+1	+1	1.00	Agree
2.3	+1	+1	+1	1.00	Agree
3.					
3.1	+1	+1	+1	1.00	Agree
3.2	+1	+1	+1	1.00	Agree
3.3	+1	+1	+1	1.00	Agree
3.4	+1	+1	+1	1.00	Agree
3.5	+1	+1	+1	1.00	Agree
3.6	+1	+1	+1	1.00	Agree
4.					
4.1	+1	+1	+1	1.00	Agree
4.2	+1	+1	+1	1.00	Agree
4.3	+1	+1	+1	1.00	Agree
4.4	+1	+1	+1	1.00	Agree
4.5	+1	+1	+1	1.00	Agree
5.					
5.1	+1	+1	+1	1.00	Agree
5.2	+1	+1	+1	1.00	Agree
5.3	+1	+1	+1	1.00	Agree
5.4	+1	+1	+1	1.00	Agree
6.					
6.1	+1	+1	+1	1.00	Agree

Table9The IOC results of draft model

Item	Expert			IOC	Results
	1	2	3		
Part1					
1.	+1	+1	+1	1.00	Agree
2.					
2.1	+1	+1	+1	1.00	Agree
2.2	+1	+1	+1	1.00	Agree
2.3	+1	+1	+1	1.00	Agree
2.4	+1	+1	+1	1.00	Agree
2.5	+1	+1	+1	1.00	Agree
Part2					
1.					
1.1	+1	+1	+1	1.00	Agree
1.2	+1	+1	+1	1.00	Agree
2.					
2.1	+1	+1	+1	1.00	Agree
2.2	+1	+1	+1	1.00	Agree
2.3	+1	+1	+1	1.00	Agree
2.4	+1	+1	+1	1.00	Agree
3.					
3.1	+1	+1	+1	1.00	Agree
3.2	+1	+1	+1	1.00	Agree
3.3	+1	+1	+1	1.00	Agree
3.4	+1	+1	+1	1.00	Agree
3.5	+1	+1	+1	1.00	Agree
3.6	+1	+1	+1	1.00	Agree
4.					
4.1	+1	+1	+1	1.00	Agree
4.2	+1	+1	+1	1.00	Agree
4.3	+1	+1	+1	1.00	Agree
5.					
5.1	+1	+1	+1	1.00	Agree
5.2	+1	+1	+1	1.00	Agree
5.3	+1	+1	+1	1.00	Agree
6.					
6.1	+1	+1	+1	1.00	Agree
6.2	+1	+1	+1	1.00	Agree
6.3	+1	+1	+1	1.00	Agree
7.					
7.1	+1	+1	+1	1.00	Agree
7.2	+1	+1	+1	1.00	Agree
7.3	+1	+1	+1	1.00	Agree
8.					
8.1	+1	+1	+1	1.00	Agree
8.2	+1	0	+1	0.67	Agree
8.3	+1	+1	+1	1.00	Agree

Table 10 The IOC results of lesson plan

Item	Expert			IOC	Results	Suggestion
	1	2	3			
Week1	+1	+1	+1	1.00	Agree	
Week2	+1	+1	+1	1.00	Agree	
Week3	+1	+1	+1	1.00	Agree	
Week4	+1	+1	+1	1.00	Agree	
Week5	+1	+1	+1	1.00	Agree	
Week6	+1	+1	+1	1.00	Agree	

Table 11 The IOC results of employability test

Item	Expert			IOC	Results
	1	2	3		
Part1					
1.	+1	+1	+1	1.00	Agree
2.	+1	+1	+1	1.00	Agree
3.	+1	+1	+1	1.00	Agree
4.	+1	+1	+1	1.00	Agree
5.	+1	+1	+1	1.00	Agree
6.	+1	+1	+1	1.00	Agree
7.	+1	+1	+1	1.00	Agree
8.	+1	+1	+1	1.00	Agree
9.	+1	+1	+1	1.00	Agree
10.	+1	+1	+1	1.00	Agree
11.	+1	+1	+1	1.00	Agree
12.	+1	+1	+1	1.00	Agree
13.	+1	+1	+1	1.00	Agree
14.	+1	+1	+1	1.00	Agree
Part2					
2.1					
1.	+1	+1	+1	1.00	Agree

2.	+1	+1	+1	1.00	Agree
3.	+1	+1	+1	1.00	Agree
4.	+1	+1	+1	1.00	Agree
2.2					
1.	+1	+1	+1	1.00	Agree
2.	+1	+1	+1	1.00	Agree
3.	+1	+1	+1	1.00	Agree
4.	+1	+1	+1	1.00	Agree
5.	+1	+1	+1	1.00	Agree
6.	+1	+1	+1	1.00	Agree
7.	+1	+1	+1	1.00	Agree
8.	+1	+1	+1	1.00	Agree
9.	+1	+1	+1	1.00	Agree
10.	+1	+1	+1	1.00	Agree
Part3					
1.	+1	+1	+1	1.00	Agree
2.	+1	+1	+1	1.00	Agree
3.	+1	+1	+1	1.00	Agree
4.	+1	+1	+1	1.00	Agree
5.	+1	+1	+1	1.00	Agree
6.	+1	+1	+1	1.00	Agree
7.	+1	+1	+1	1.00	Agree
8.	+1	+1	+1	1.00	Agree
9.	+1	+1	+1	1.00	Agree
10.					
11.	+1	+1	+1	1.00	Agree
12.	+1	+1	+1	1.00	Agree
13.	+1	+1	+1	1.00	Agree
14.	+1	+1	+1	1.00	Agree
15.	+1	+1	+1	1.00	Agree
16.	+1	+1	+1	1.00	Agree
Part4					
1.	+1	+1	+1	1.00	Agree
2.	+1	+1	+1	1.00	Agree
3.	+1	+1	+1	1.00	Agree
4.	+1	+1	+1	1.00	Agree
5.	+1	+1	+1	1.00	Agree
6.	+1	+1	+1	1.00	Agree
7.	+1	+1	+1	1.00	Agree
Part5					
1.	+1	+1	+1	1.00	Agree
2.	+1	+1	+1	1.00	Agree
3.	+1	+1	+1	1.00	Agree

4.	+1	+1	+1	1.00	Agree
5.	+1	+1	+1	1.00	Agree
6.	+1	0	+1	0.67	Agree
7.	+1	+1	+1	1.00	Agree
8.	+1	+1	+1	1.00	Agree
9.	+1	+1	+1	1.00	Agree
10.	+1	+1	+1	1.00	Agree
Part6					
6.1					
1.	+1	+1	+1	1.00	Agree
2.	+1	+1	+1	1.00	Agree
3.	+1	+1	+1	1.00	Agree
4.	+1	+1	+1	1.00	Agree
5.	+1	+1	+1	1.00	Agree
6.	+1	+1	+1	1.00	Agree
7.	+1	+1	+1	1.00	Agree
8.	+1	+1	+1	1.00	Agree
6.2					
1.	+1	+1	+1	1.00	Agree
2.	+1	+1	+1	1.00	Agree
3.	+1	+1	+1	1.00	Agree
4.	+1	+1	+1	1.00	Agree
5.	+1	+1	+1	1.00	Agree
6.	+1	+1	+1	1.00	Agree
7.	+1	+1	+1	1.00	Agree
8.	+1	+1	+1	1.00	Agree
9.	+1	+1	+1	1.00	Agree
10.	+1	+1	+1	1.00	Agree
Part7					
1.	+1	+1	+1	1.00	Agree
2.	+1	+1	+1	1.00	Agree
3.	+1	+1	+1	1.00	Agree
4.	+1	+1	+1	1.00	Agree
5.	+1	+1	+1	1.00	Agree
6.	+1	+1	+1	1.00	Agree
7.	+1	+1	+1	1.00	Agree
8.	+1	+1	+1	1.00	Agree
9.	+1	+1	+1	1.00	Agree
Part8					
1.	+1	+1	+1	1.00	Agree
2.	+1	+1	+1	1.00	Agree
3.	+1	+1	+1	1.00	Agree
4.	+1	+1	+1	1.00	Agree

Table12 The IOC results of student satisfaction survey

Item	Expert			IOC	Results
	1	2	3		
Part1					
1.	+1	+1	+1	1.00	Agree
2.	+1	+1	+1	1.00	Agree
3.	+1	+1	+1	1.00	Agree
4.	+1	+1	+1	1.00	Agree
5.	+1	+1	+1	1.00	Agree
6.	+1	+1	+1	1.00	Agree
7.	+1	+1	+1	1.00	Agree
Part2					
1.					
1.1	+1	+1	+1	1.00	Agree
1.2	+1	+1	+1	1.00	Agree
1.3	+1	+1	+1	1.00	Agree
1.4	+1	+1	+1	1.00	Agree
1.5	+1	+1	+1	1.00	Agree
1.6	+1	+1	+1	1.00	Agree
1.7	+1	+1	+1	1.00	Agree
1.8	+1	+1	+1	1.00	Agree
2.					
2.1	+1	+1	+1	1.00	Agree
2.2	+1	+1	+1	1.00	Agree
2.3	+1	+1	+1	1.00	Agree
2.4	+1	+1	+1	1.00	Agree
2.5	+1	+1	+1	1.00	Agree
2.6	+1	+1	+1	1.00	Agree
2.7	+1	+1	+1	1.00	Agree
3.					
3.1	+1	+1	+1	1.00	Agree
3.2	+1	+1	+1	1.00	Agree
3.3	+1	+1	+1	1.00	Agree
3.4	+1	+1	+1	1.00	Agree
3.5	+1	+1	+1	1.00	Agree
4.					
4.1	+1	+1	+1	1.00	Agree
4.2	+1	+1	+1	1.00	Agree
4.3	+1	+1	+1	1.00	Agree
4.4	+1	+1	+1	1.00	Agree
4.5	+1	+1	+1	1.00	Agree
5.					
5.1	+1	+1	+1	1.00	Agree
5.2	+1	+1	+1	1.00	Agree
5.3	+1	+1	+1	1.00	Agree
5.4	+1	+1	+1	1.00	Agree

Table 13 The IOC results of model form confirmaton

Item	Expert			IOC	Results
	1	2	3		
Part1					
1.	+1	+1	+1	1.00	Agree
1.1	+1	+1	+1	1.00	Agree
1.2	+1	+1	+1	1.00	Agree
1.3	+1	+1	+1	1.00	Agree
1.4	+1	+1	+1	1.00	Agree
1.5	+1	+1	+1	1.00	Agree
1.6	+1	+1	+1	1.00	Agree
1.7	+1	+1	+1	1.00	Agree
1.8	+1	+1	+1	1.00	Agree
2.					
2.1	+1	+1	+1	1.00	Agree
2.2	+1	+1	+1	1.00	Agree
2.3	+1	+1	+1	1.00	Agree
2.4	+1	+1	+1	1.00	Agree
2.5	+1	+1	+1	1.00	Agree
3.					
3.1	+1	+1	+1	1.00	Agree
3.2	+1	+1	+1	1.00	Agree
3.3	+1	+1	+1	1.00	Agree
3.4	+1	+1	+1	1.00	Agree
3.5	+1	+1	+1	1.00	Agree
4.					
4.1	+1	+1	+1	1.00	Agree
4.2	+1	+1	+1	1.00	Agree
4.3	+1	+1	+1	1.00	Agree
4.4	+1	+1	+1	1.00	Agree
5.					
5.1	+1	+1	+1	1.00	Agree
5.2	+1	+1	+1	1.00	Agree
5.3	+1	+1	+1	1.00	Agree
5.4	+1	+1	+1	1.00	Agree
5.5	+1	+1	+1	1.00	Agree

Research results

Table 14 An evaluation on the style and structure of a draft with role-play learning with workshop teaching model, by using employability diagnostic system as the basis for e-learning to promote employability skills for undergraduate students in China

Experts opinion							
Item	Expert	Expert	Expert	Expert	Expert	IOC	Interpretation of Results
	1	2	3	4	5		
Part1							
1.	5	5	5	5	5		Most suitable
2.							
2.1	5	5	5	5	5		Most suitable
2.2	5	5	5	5	5		Most suitable
2.3	5	5	5	5	5		Most suitable
2.4	5	5	5	5	5		Most suitable
2.5	5	5	5	5	5		Most suitable
Part2							
1.							
1.1	5	5	5	5	5		Most suitable
1.2	5	5	5	5	5		Most suitable
2.							
2.1	5	5	5	5	5		Most suitable
2.2	5	5	5	5	5		Most suitable
2.3	5	5	5	5	5		Most suitable
2.4	5	5	5	5	5		Most suitable

3.						
3.1	5	5	5	5	5	Most suitable
3.2	5	5	5	5	5	Most suitable
3.3	5	5	5	5	5	Most suitable
3.4	5	5	5	5	5	Most suitable
3.5	5	5	5	5	5	Most suitable
3.6	5	5	5	5	5	Most suitable
4.						
4.1	5	5	5	5	5	Most suitable
4.2	5	5	5	5	5	Most suitable
4.3	5	5	5	5	5	Most suitable
5.						
5.1	5	5	5	5	5	Most suitable
5.2	5	5	5	5	5	Most suitable
5.3	5	5	5	5	5	Most suitable
6.						
6.1	5	5	5	5	5	Most suitable
6.2	5	5	5	5	5	Most suitable
6.3	5	5	5	5	5	Most suitable
7.						
7.1	5	5	5	5	5	Most suitable
7.2	5	5	5	5	5	Most suitable
7.3	5	5	5	5	5	Most suitable
8.						
8.1	5	5	5	5	5	Most suitable
8.2	5	5	5	5	5	Most suitable
8.3	5	5	5	5	5	Most suitable

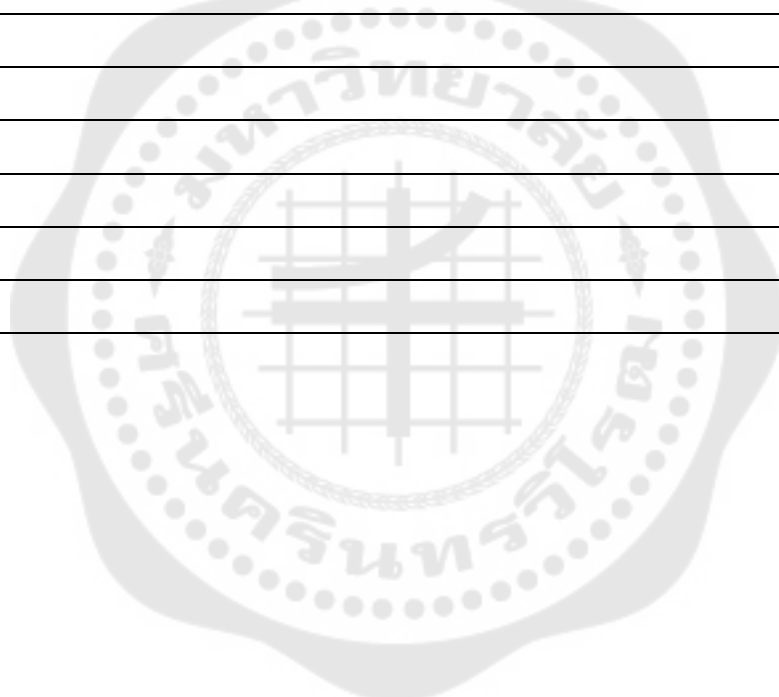
Table15 A lesson plan on role-play learning with workshop teaching model, by using employability diagnostic system to enhance employability skills for undergraduate students in China

Experts opinion							IOC	Interpretation of Results
Item	Expert 1	Expert 2	Expert 3	Expert 4	Expert 5	Expert 6		
Week1	5	5	5	5	5		Highly feasible	
Week2	5	5	5	5	5		Highly feasible	
Week3	5	5	5	5	5		Highly feasible	
Week4	5	5	5	5	5		Highly feasible	
Week5	5	5	5	5	5		Highly feasible	
Week6	5	5	5	5	5		Highly feasible	

 Students opinion

Item _____

	Part 1	Part 2	Part 3	Part 4	Part 5	Part 6	Part 7	Part 8	IOC	Interpretation of Results
Student1	5	5	5	5	5	5	5	5		Highly feasible
Student2	5	5	5	5	5	5	5	5		Highly feasible
Student3	5	5	5	5	5	5	5	5		Highly feasible
Student4	5	5	5	5	5	5	5	5		Highly feasible
Student5	5	5	5	5	5	5	5	5		Highly feasible
Student6	5	5	5	5	5	5	5	5		Highly feasible



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