



Effect of Experiential Learning to Promote Vocational College Students' Self-Career Planning

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Abstract

Background and Aims: With the rapid development of the social economy and the increasingly fierce employment competition, it is becoming increasingly difficult for college students to find a suitable job, requiring appropriate career planning to help them find a suitable job. Therefore, career planning has become an important part of helping them find a suitable job. It can not only help students find the right role positioning, avoid blindly following the trend, but also promote personal development and maximize personal value. Through career planning, college students can clarify career goals and directions, improve their career competitiveness, and thus stand out in the fierce job market. This study compares the self-career planning before and after learning, the comparison of self-career planning after learning with the 70% standard, and the comparison of career planning after learning with the 70% standard.

Methodology: The sample of this study was 30 first-year vocational students (1 class) in the academic year of 2024, School of Big Data and Artificial Intelligence at Zhengzhou University of Science and Technology by using cluster random sampling. This study used a group pretest and post-test design. The research instruments were 1) eight lesson plans, which means scores of the appropriateness were at 4.62 (S.D. = 0.52), 2) a self-career planning ability evaluation form with a reliability of 0.733, and 3) students' satisfaction toward experiential learning questionnaire with a reliability of 0.728. The data was analyzed using mean, standard deviation, t-test for the dependent sample, and t-test for one sample.

Result: The research findings revealed that: 1) Posttest scores of students' self-career planning ability (70.13, S.D. = 3.42) were greater than pretest scores (M=51.63, S.D.= 4.70) at the 0.01 level of statistical significance ($t_{29}=43.75$, $p=0.001$). 2) Students' self-career planning ability after learning through experiential learning was statistically higher than the criterion of 70 percent at the 0.01 level of statistical significance ($t_{29}=28.22$, $p=0.001$). 3) The overall mean scores of students' satisfaction after learning through experiential learning were 4.03 out of a possible full mark of 5, and the standard deviation was 0.35, which was statistically higher than the criterion of 3.5 (70 percent) at the 0.01 level of statistical significance ($t_{29}=8.17$, $p=0.001$).

Conclusion: The body knowledge gained from this research was the utilization of experiential learning on a career planning course, which was mainly five steps in the experiential learning: Step 1 Warm-up and introduction, Step 2 Experience and practice, Step 3 Reflective observation, Step 4 Abstract generalization, Step 5 Application. Explain a little that 5 teaching steps can improve self-care planning.

Keywords: Experiential Learning; Self-career Planning; Self-career Planning Ability; Career Planning

Introduction

With the rapid development of the social economy and the increasingly fierce employment competition, it is becoming increasingly difficult for college students to find a suitable job, which requires appropriate career planning to help them find a suitable job. Therefore, career planning has become an important part of helping them find a suitable job. It can not only help students find the right role positioning and avoid blindly following the trend, but also promote personal development and maximize personal value. Through career planning, college students can clarify career goals and directions, improve their career competitiveness, and thus stand out in the fierce job market. (Dewey, 1938)

However, college students still face many issues in career planning. The main problems include a lack of self-awareness and career positioning, a lack of professional guidance and support, information asymmetry, and a lack of practical experience. The existence of these problems often leaves college students feeling lost and at a loss in the process of career planning. For example, when some college students talk about "whether





they have considered their future or work," although most students will consider their future, only a few students implement corresponding plans to achieve their goals. This shows that college students are aware of the importance of career planning, but lack specific planning and actual actions. (Flores et al, 2012)

In terms of the development trends and employment prospects of different majors and industries, college students need to have a certain degree of sensitivity and foresight. For instance, in recent years, the internet industry has developed rapidly, and majors such as artificial intelligence and big data have gradually become popular. College students can understand the latest industry trends by looking up information, consulting professionals, and attending job fairs, providing a reference for their major selection. (Guichard, 2013)

David Kolb suggests that after clarifying their career goals, college students need to enhance their professional qualities and comprehensive abilities through course study and practice. They need to actively and proactively implement their plans, continuously improving their skills and experience to adapt to the ever-changing market environment. At the same time, one should remain flexible and open, continually learning and exploring new opportunities and fields. This includes two parts: one is to master solid theoretical foundations through the study of four courses; the other is to actively participate in practical activities, such as community activities and social practice, to exercise their organizational skills, communication skills, and teamwork abilities. Additionally, to enhance their competitiveness, they can actively participate in various competitions and training sessions, such as innovation and entrepreneurship competitions and academic seminars, to broaden horizons and improve their practical operation capabilities. (Kolb, 1984)

In the process of career planning, college students may encounter setbacks and difficulties. At this time, learning how to adjust and reflect is particularly important. When work fails or develops differently than expected, college students need to calmly analyze the reasons, adjust their mindset and strategy, and promptly summarize lessons learned to improve in plans. At the same time, college students should also pay close attention to industry trends and promptly adjust their career plans to adapt to market changes and developments (Guo Yuesheng & Liu, 2019)

In conclusion, the career planning process for college students is one of continuous exploration and improvement. By deeply understanding the importance of career planning, self-aware, analyzing academic and industry conditions, setting goals, enhancing abilities, mastering job hunting strategies, and learning to adjust and reflect, college students can better prepare for their future and realize the transformation from dreams to reality. In this process, college students can not only gain extensive knowledge and skills but also cultivate a strong will and a positive attitude towards life, laying a solid foundation for their future life path.

The career planning course is a highly practical course that requires students to combine theoretical knowledge with practice. Experiential learning involves creating specific career scenarios to experience, think about, and explore in practice, thereby better mastering the theories and methods of career planning.

In experiential learning, students can gain a deeper understanding of their interests, strengths, and values by participating in activities such as mock interviews and career plays. This allows them to more accurately define their career direction. At the same time, this teaching method also helps students understand the characteristics and requirements of different fields, providing a reference for future career choices.

Research questions

1. How was self-care planning before and after learning through experiential learning?
2. How was the vocational students' self-care planning after learning through experiential learning compared with the criterion set at 70%?
3. How was the vocational college students' satisfaction after learning by using experiential learning, with the criterion set at 70%?

Research objectives

1. To compare self-care planning before and after learning by using experiential learning.
2. To compare self-care planning after learning by using experiential learning with a criterion set at 70%.
3. To compare the satisfaction of vocational college students after learning by using experiential





learning with the criterion set at 70%.

Literature Review

1. Experiential learning

The experiential learning method refers to the teaching method that achieves the established teaching purpose in the teaching process, helps students quickly and correctly understand the comprehensive and harmonious development of psychological function content, promotes students' emotional experience, and introduces, creates, or creates specific scenes or atmosphere suitable for the teaching content. It is of great significance in promoting students' deep learning, stimulating their learning interest, improving their practical ability, cultivating innovative thinking, promoting emotional development, and enhancing their sense of social responsibility.

From the synthesis of teaching steps of experiential learning according to 4 educators, as mentioned in the previous section. There are teaching steps of experiential learning as follows;

Step 1 Warm-up and introduction

At the beginning of the course, the motivation for learning is established by stimulating the student's interest and curiosity. Questions, stories, pictures, videos, and other methods can be used to introduce themes and stimulate students to think

Step 2 Experience and practice

Design a series of experience activities, let students learn through personal experience and participation in practice. This can include field trips, role-playing, simulations, group discussions, case studies, .etc

Step 3 Reflective observation

Students collate, explain, and evaluate the experience gained through observation and reflection.

Step 4 Abstract generalization

Students will summarize and sort out the concepts or principles obtained from observation and reflection, .and connect them with the existing knowledge framework

Step 5 Application

Students are encouraged to apply what they learn to practical situations and connect with knowledge in other areas. Help students to expand their thinking and ability, and develop the ability to innovate and solve problems

2. Self-career planning

Self-career planning is an important part of personal career development, which refers to the process of designing and planning the work, position, or career development path at each stage of life. It is highly related to the future career development direction, growth path, and achievement. Scientific and reasonable self-career planning needs comprehensive self-cognition, clear goal setting, careful planning, full exploration of potential, accurate grasp of industry information, continuous improvement of competitiveness, effective implementation of planning, and continuous self-assessment and adjustment. The importance for individuals is to help individuals determine their career direction, improve their competitiveness in employment, adapt to career changes, and achieve career development and personal growth. Through career planning, individuals can build their career path with more goals and plans and move towards success and satisfaction. Through the theoretical comprehensive analysis of four scholars, self-care planning is a systematic process that helps you define your career goals and develop a range of strategies and action plans to achieve these goals. It can be divided into five steps:

Stage 1: Self-perception

Understand personal characteristics such as your interests, values, skills, strengths, and weaknesses. With your self-assessment, you can understand your career preferences and the basis of your career development.

Stage 2: career cognition

Start researching and exploring areas and jobs relevant to your career goals. Understand the different career paths, industry trends, job requirements, and development prospects to help you make informed career choices.



Stage 3: Career decision-making

Clarify your career goals based on the results of your self-assessment. Set short-and long-term goals and ensure that they align with your values and the lifestyle you expect.

Stage 4: Planning and implementation

Develop a detailed action plan that lists specific steps and schedules to achieve your career goals. Make sure your plan is practical and adjusted, and revised as needed.

Stage 5: Assessment and adjustment

Career planning is a dynamic process that requires continuous development and adjustment. Keep learning and growing, and adapt your career goals and approaches to the changing career environment and personal needs.

3. Students' satisfaction

Student satisfaction refers to students' evaluation of the overall experience and feelings about college students' career planning courses. It reflects students' satisfaction with the course, including the evaluation of course content, teaching methods, teachers' performance, and learning resources. In addition to the above aspects, the definition of student satisfaction can also include students' evaluation of curriculum organization and management, learning atmosphere, evaluation methods, and so on. The evaluation of students' satisfaction can be carried out through questionnaires, group discussions, and individual interviews. By getting students' feedback and suggestions, we can further improve and optimize the career planning course, and enhance students' satisfaction and learning effect. (Huang & Zhang. 2023)

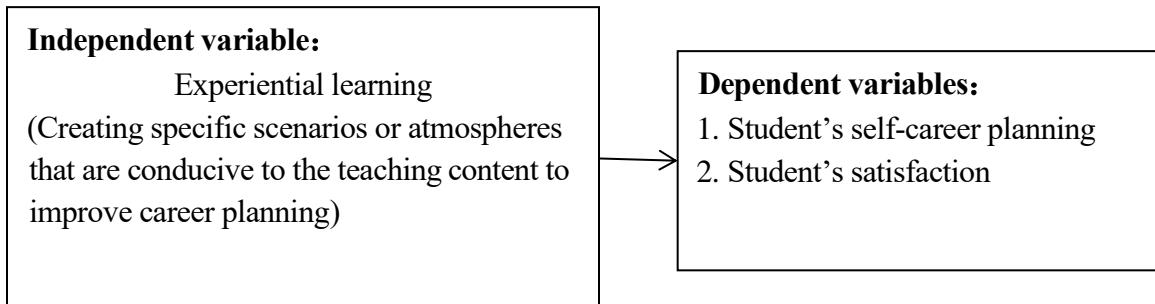


Figure 1 Research Conceptual Framework

Methodology

1. Population and sample

1.1 The population of this study was 100 first-year vocational students in the School of Big Data and Artificial Intelligence at Zhengzhou University of Science and Technology.

1.2 The sample of this study was 30 first-year vocational students (1 class) from Class 1 in the academic year of 2024 at the School of Big Data and Artificial Intelligence at Zhengzhou University of Science and Technology, which was selected by using a cluster random sampling technique.

2. Research instruments

The research instruments used in this study were;

2.1 Experimental instruments were 8 lesson plans, with 16 hours of self-career planning ability training as shown in Table 1. According to the expert evaluation form, it was found that the average scores of lesson plans were 4.62 with a standard deviation of 0.52, which means the quality of lesson plans was at a very high level.

Table 1 The eight lesson plan of the self-career planning course

Lesson Plan	Topic	Time Duration
1	Meaning pursuit--Career planning and the realization of the career ideal of learning into practice	2 hours
2	Meaning pursuit--Auction Values	2 hours



Lesson Plan	Topic	Time Duration
3	Self-awareness is the island of interest	2 hours
4	Self-awareness --Character search	2 hours
5	Career decision-making--Decision lifeline	2 hours
6	Career decision-making--Decision balance sheet	2 hours
7	Apply for a job--Play job fair	2 hours
8	Apply for a job--Interview for the "trader"	2 hours

2.2 Data collection instruments were the evaluation of self-care planning ability and the students' satisfaction questionnaire. The construction process of self-care planning ability and students' satisfaction questionnaire was as follows;

2.2.1 The construction of the self-care planning ability evaluation form was as follows

Step 1: Review the concept of self-care planning ability, especially the definition and dimensions of self-care planning ability

Step 2: The evaluation form items consisted of dimensions and indicators of self-care planning, each dimension can be subdivided into relevant indicators to make the evaluation more specific and comprehensive.

Step 3: The self-care planning ability evaluation form included a 5-point scale

Step 4: The draft evaluation form was presented to thesis advisors for their advice on the appropriateness, precision, accuracy, ambiguity, and wording of the evaluation form. After that, the draft evaluation form was revised according to the thesis advisors' suggestions. The evaluation form was offered to the three experts for the content validity check and suggestions such as the type of questions, accuracy of the evaluation form, and wording.

Step 5: Revise the evaluation form according to the experts' comments and suggestions.

Step 6: Analyze the IOC index of the evaluation form items. If the Index of Item Objective Congruence (IOC) of each item of the form is higher than 0.5 that means it can be used in the evaluation form. It was found that the Index of Item-objective congruence of each item ranged from 0.8-1.00 which means the self-care planning had validity.

Step 7: Try out the self-care planning ability evaluation form. Then, the reliability of the evaluation form was analyzed by using Cronbach's alpha coefficient, with which the result was 0.728. Therefore, the evaluation form proved appropriate for collecting data.

2.2.2 The construction of the students' Satisfaction questionnaire was as follows

Step 1: Studied documents related to constructing questionnaires.

Step 2: Construct a questionnaire. The questionnaire consisted of three sections: Section 1 recorded the students' personal information. Section 2 was a five-point Likert scale questionnaire ranging from very high, high, moderate, low, and very low. This section of the questionnaire consisted of questions or statements asking about students' opinions toward the instruction through experiential learning in terms of the learning aspect, instructional strategy, teaching efficiency, and instructional evaluation. Section 3 was open-ended questions asking students' opinions toward instruction. Also, space was provided for additional opinions or other suggestions.

Step 3: The draft questionnaire was presented to thesis advisors for their advice on the appropriateness, precision, accuracy, ambiguity, and wording of the questionnaire. After that, the draft questionnaire was revised according to the thesis advisors' suggestions. The evaluation form was offered to the three experts for the content validity check and suggestions. The quality of the questionnaire was considered from the Index of Item Objective Congruence (IOC) obtained from the evaluation form.

Step 4: Revise the questionnaire according to the experts' comments and suggestions.

Step 5: Analyzing the IOC index of the questionnaire items. If the Index of Item Objective Congruence (IOC) of each item of the questionnaire is higher than 0.5 that means it can be used in the questionnaire. The result of analyzing the IOC index showed that all questionnaire items were appropriate and



could be used in the test. It was found that the Index of Item-objective congruence of each item ranged from 0.8-1.00. that means the questionnaire had validity.

Step 6: The researcher tried out the draft questionnaire on 30 students who were not in the sample for this research. After that, the collected data was analyzed by using the statistical package program to calculate the reliability through Cronbach's alpha coefficient. It was found that the value of Cronbach's alpha coefficient was 0.728

3. Data collection

Data collection on the self-care planning ability and students' satisfaction under the instruction of learning management by using experiential learning was as follows:

3.1 The samples were pre-evaluated for self-care planning ability before teaching through the lesson plans.

3.2 The samples were taught through the lesson plans constructed based on experiential learning.

3.3 After being taught for 16 hours according to the 8 lesson plans, the sample was post-evaluated by using a self-care planning ability form.

3.4 The students were given students' satisfaction with the learning management was assessed using an experiential learning questionnaire.

4. Data analysis

In this study, data were analyzed using the statistical program according to the research objectives.

4.1 Conducted a t-test for dependent samples to compare the students' self-care planning ability before and after learning through learning management using experiential learning.

4.2 Conducted a t-test for one sample to compare the students' self-care planning ability after learning through learning management using experiential learning, with the criterion set at 70%.

4.3 Conducted a t-test for one sample to compare the students' satisfaction after learning through learning management using experiential learning, with the criterion set at 70%.

Results

The research results were presented according to the research objectives as follows;

The results of comparing the different scores of students' self-care planning ability before and after learning through experiential learning.

The result of comparing the different scores of self-care planning before and after learning through experiential learning is shown in Table 2 about descriptive statistics and t-tests analyzed by the statistical package program. This table aimed to answer the research objective about whether experiential learning was able to enhance self-care planning.

Table 2 The result of comparing the different scores of students' self-care planning ability before and after learning through experiential learning

Group	n	Pretest scores		Posttest scores		t	p
		M	S.D.	M	S.D.		
Experimental group	30	51.63	4.70	70.13	3.42	43.75**	0.001

**p<0.01

As presented in Table 2, the mean scores of the pretest of students' self-care planning ability were 51.63 (S.D.= 4.70), and the post-test of students' self-care planning ability was 70.13 (S.D. =3.42). Moreover, it aimed to examine the different scores before and after using experiential learning to enhance self-care planning ability. The result of this table showed that post-test scores of students' self-care planning ability were greater than pretest scores at the 0.01 level of statistical significance ($t29 =43.75$, $p=0.001$).

The results of comparing the different scores of students' self-care planning ability after learning through experiential learning, with the criteria set at 70 percent

The result of comparing the different scores of students' self-care planning ability after learning through experiential learning with the criteria set at 70 percent is shown in Table 3, about descriptive statistics and t-test analysis by the statistical package program. This table aimed to answer the research objective about whether

experiential learning was able to enhance students' self-care planning ability.

Table 3 The result of comparing the different scores of self-care planning ability after learning through experiential learning with the criteria set at 70 percent

Group	n	Full score	Criteria score	M	S.D.	t	p
Experimental group	30	75	52.5	70.13	3.42	28.22**	0.001

**p<0.01

As presented in Table 3, the mean scores of students' self-care planning ability after learning through experiential learning were 70 out of possible full marks of 75 and the standard deviation was 3.42 which was statistically higher than the criterion of 70 percent at 0.01 level of statistical significance ($t_{29}=28.22$, $p=0.001$).

The result of comparing the satisfaction of vocational college students after learning by using experiential learning with the criterion set at 70%

The result of comparing the mean score of satisfaction after learning through experiential learning was shown in Table 4 about descriptive statistics and t-test analyzed by the statistical package program. This table aimed to answer the research objective about whether using experiential learning was able to enhance students' satisfaction.

Table 4 The results of students' satisfaction after learning through experiential learning

Dimension	M	S.D.	Level of satisfaction
1) Learning aspect	3.96	0.47	High
2) Instructional Strategy	4.04	0.52	High
3) Teaching efficiency	4.03	0.37	High
4) Instructional evaluation	4.09	0.47	High
The overall result of satisfaction	4.03	0.35	High

As shown in Table 4, the overall results of students' satisfaction through experiential learning were at a high level, with mean scores of 4.03 and a standard deviation of 0.23. Thus, it was concluded that students' satisfaction of the students after receiving experiential learning was at a high level.

In addition, the result of comparing the satisfaction of vocational college students after learning by using experiential learning with the criterion set at 70%. This is shown in table 5.

Table 5 The result of comparing the satisfaction of vocational college students after learning by using experiential learning, with the criterion set at 70%

Group	n	Full score	Criteria score	M	S.D.	t	p
Experimental group	30	5	3.5	4.03	0.35	8.17**	0.001

**p<0.01

As presented in Table 5, the mean score of students' satisfaction after learning through experiential learning was 4.03 from possible full marks of 5 and the standard deviation was 0.35 which was statistically higher than the criterion of 3.5 (70 percent) at 0.01 level of statistical significance ($t_{29}=8.17$, $p=0.001$).

Discussion

1. Discussion of experiential learning can cultivate students' self-care planning ability.

The research finding revealed that posttest scores of self-care planning of students who learned through the five steps of experiential learning were greater than pretest scores at the 0.01 level of statistical significance ($t_{29}=43.75$, $p=0.001$). This result may be due to the impact of the five steps of experiential learning on the student learning process:

Step 1: Warm-up and introduction



Teachers can captivate students' attention and stimulate their learning interest by designing engaging introduction activities, such as games, videos, and storytelling. By enhancing cooperation among students through methods like group learning and role-playing, teachers can foster students' team spirit and social communication skills. This helps students maintain their sense of and motivation during the learning process. (Mo & Zhang, 2006)

Step 2 Experience and practice

Teachers design the simulation situation according to the teaching content so that students can personally feel the application scenario of the knowledge. Provide students with the necessary independent experiments and tools, and materials to make or operate. (Savickas, 2002)

Students play a specific role in completing tasks or solving problems in simulated situations. Through various forms of activities such as situational simulation, hands-on, role-playing, and project research, students can deepen their understanding and application of knowledge in practice and develop their abilities in various aspects.

Step 3 Reflective observation

In reflective observation, students need to think deeply about the problems encountered in the actual activities and analyze the causes and solutions of the problems. This analytical process helps to develop students' critical thinking and problem-solving skills. Through reflection, students can combine the knowledge they learn with their practical experience to form a deeper understanding and understanding. Encourage students to communicate and share, and create more sparks and inspiration by bumping in with ideas (Warren & Karner, 2005)

Step 4 Abstract generalization

The fourth step of experiential learning, "abstract or generalization", is an important link for students to apply theoretical knowledge to practice after the practical experience, observation, and reflection, and it is an important link to test and consolidate the learning results. Teachers should provide practical cases related to the teaching content, and guide students to use what they have learned for analysis and discussion. Through case analysis, students can deeply understand the application of knowledge and improve their ability to solve problems. Students are encouraged to participate in social practice activities such as social services and enterprise internships. Through social practice, students can personally experience the social reality, understand the social needs, and use what they have learned to solve practical problems. (Wei, 2008)

Step 5 Application

Teachers should design appropriate practical activities according to the actual situation and interests of students. In practical activities, teachers should provide the necessary guidance and support to help students solve the problems and difficulties they encounter. After the practice activities, the teachers should evaluate and provide feedback on the students' performance on time. The evaluation content should include students' practical ability, team spirit, innovative thinking, and other aspects. Through evaluation and feedback, students can understand their strengths and weaknesses and provide direction for future learning. (Wurdinger & Carlson, 2010)

2. Discussion of experiential learning can enhance students 'satisfaction

The idea that experiential learning can improve student satisfaction is supported in many aspects. Here is a detailed explanation of this view:

1) Definition and characteristics of experiential learning

Experiential learning is to introduce or create a scene or atmosphere consistent with the teaching content in the course of the classroom teaching process, so that the teaching content can be restored or reproduced, so that students can understand, construct knowledge, and develop their ability through their personal experience and practice. It emphasizes students' subjectivity and practicality and encourages students to acquire knowledge and improve their abilities through personal experience.

2) The reasons why experiential learning improves student satisfaction

1. Stimulate learning interest: Experiential learning stimulates students' learning interest and curiosity so that students can maintain a high degree of enthusiasm and initiative in the learning process.



2. Enhance learning experience: Through personal experience, students can have a deeper understanding of the teaching content and feel the charm and power of knowledge, to enhance the learning experience and learning effect.

3. Cultivating practical ability: experiential learning focuses on cultivating students' practical ability and innovative abilities so that students can constantly find and solve problems in practice and improve themselves.

4. Promote the interaction between teachers and students: experiential learning emphasizes the interaction between teachers and students and the interaction between students so that students can grow up together in communication and cooperation, and form a good learning atmosphere and interpersonal relationship.

3) Practice cases and effects

Taking the career planning course in colleges and universities as an example, the construction of an experiential learning model can guide college students to change their employment thoughts, develop a scientific employment concept, cultivate graduates to form a clear employment goal, and enhance the comprehensive quality of graduates' employment. By simulating the experience scene of career planning, promoting students to actively participate in career exploration activities, and discussing and commenting on career planning issues, students 'career planning awareness and career planning skills can be effectively enhanced, to improve students' employment competitiveness and satisfaction. (Wu, 2014)

Recommendation

The main direction of this study is to determine the impact of experiential learning on undergraduate self-care planning ability, which is a general study of experiential learning. Therefore, several directions requiring further study are as follows:

1. Advice on self-career planning

1. Develop personalized self-assessment tool: Combining psychology and pedagogy theories, more scientific and personalized self-assessment questionnaires or software are designed to help students more accurately identify their characteristics and potential advantages.

2. Integrate into the dynamic evaluation mechanism: In the process of experiential learning, regular or irregular self-assessment is introduced, and peer evaluation and teacher feedback are combined to form a dynamic evaluation system to promote students' self-cognition and development.

3. Goal-setting strategy guidance: Develop a system of goal-setting guidance courses or workshops, teaching students SMART principles (specific, measurable, attainable, relevant, and time-limited) to help them set clear and feasible career goals.

2. Advice on experiential learning

1. Target adjustment mechanism: Study and establish a set of effective target adjustment mechanisms to help students flexibly adjust their career goals and maintain the motivation and direction of setbacks or environmental changes.

2. Implementation and supervision mechanism: Study and establish a set of effective career planning implementation and supervision mechanisms, including time management, task decomposition, progress tracking, and other links, to ensure that students can promote the implementation of career planning as planned.

3. Potential display platform: Establish or optimize the existing potential display platform, such as campus innovation and entrepreneurship competition, skills competition, etc., to provide students with opportunities to showcase themselves and exercise their abilities.

4. Expand information access channels: Research and expand the access channels of industry information, such as the establishment of a school-enterprise cooperation platform, inviting industry experts to give lectures, etc., to provide students with more comprehensive and timely information support.

5. Industry-specific competitiveness research: According to the characteristics of different industries and positions, study and formulate the corresponding competitiveness improvement strategies and methods.



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