



RESEARCH ARTICLE

Development of a Teaching Model for Enhancing Creative Teaching Skills of Students' Teachers in Guangxi Normal University

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ARTICLE INFO	ABSTRACT
Received: Aug 13, 2024 Accepted: Oct 22, 2024	The purpose of this study is to develop teaching models for normal school students to enhance their creative teaching skills and evaluate the effectiveness of these models. The sample group consists of 68 third-year students majoring in e-commerce at Guilin Guangxi Normal University in China. The research tools used for data collection include the document analysis method, questionnaire survey method, and interview method. The research results are as follows: firstly, exploration of innovative teaching skills models by integrating professional education, skills education, and innovative education perspectives. Based on relevant theories, the study delves into the principles, objectives, learning processes, and evaluation of innovative teaching skills training models. The study focuses on three components of creative teaching skills: observation, creative thinking, and operational skills. Five experts are invited to conduct quality testing on the models developed from these components to demonstrate the effectiveness of the CEDM education model. The innovative teaching skills training mode is then optimized based on survey results. Secondly, quality testing is conducted before implementing the course to showcase the effectiveness of the training model for creative teaching skills. Following the course implementation, 8 class hours are dedicated to cultivating creative teaching skills. It is observed that normal students' creative teaching skills after implementing the teaching model have significantly improved compared to before, with statistical significance at .05. Overall, the implementation of the model has led to enhancements in students' creative teaching skills.
Keywords Creativity Creative teaching skills Teaching model	
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INTRODUCTION

Since the 1980s, when the U.S. National Commission on Excellence in Education (1983) released the report "The Nation is in Crisis: The Imperative for Educational Reform," a new wave of educational reforms has been set off in various countries, and the standard of talent cultivation for Chinese university students has been further raised. Creative education combines professional education with skills education, focusing on the cultivation of specialized and professional talents. The "skills" in the competency standard highlights the attributes of today's education, creative teaching skills, strengthens the process of competency cultivation, updates and optimizes the education and teaching mode of talent cultivation, and develops the cultivation mode of innovative teaching skills.

The creative teaching skills of Chinese university normal students are related to the future of education, which needs a set of effective teaching models to support. This paper is devoted to exploring a creative teaching skills model from the perspective of combining professional education, skills education and innovative education, and on the basis of relevant theories, it explores the principles, objectives, learning process and learning evaluation of the innovative teaching skills cultivation model. The specific research method is to take 68 students majoring in e-commerce trained by normal students at Guangxi Normal University as the research sample, and use 8 class hours to study the three components of creative teaching skills, namely observation, creative thinking, and operational skills, to construct a creative teaching skills model; Second, to invite 5 experts to conduct quality tests on the model developed from the three aspects of observation, creative thinking and operational skills to carry out quality testing; Third, questionnaire survey and interview of e-commerce students; Fourth, to demonstrate the effectiveness of the CEDM education model; Finally, according to the results of the survey, to optimize the creative teaching skills training model. Through data analysis, the survey results show that teachers' cultivation of creative teaching skills in the classroom. After the implementation of the course, students' creative teaching skills have been improved.

2. Research Questions

What is the teaching model for normal university students to develop creative teaching skills?

What is the effectiveness of the research on teaching model of normal students' teaching skills?

3. Research objective

To development teaching models for students to develop creative teaching skills.

To evaluate effectiveness of teaching models for students' creative teaching skills.

4. Research scope

The object of this study is students majoring in e-commerce at the Vocational and Technical Normal College of Guangxi Normal University in Guilin, Guangxi, China. A total of 417 students participated in the "Teacher Professional Skills Training Course" in the second semester of the 2023 academic year. The selection of students majoring in e-commerce as research samples for innovative teaching skills is due to its solid professional knowledge, rich practical experience, advanced innovative thinking, high learning enthusiasm, and reliable feedback advantages in today's information age. In this study, the author served as a subject teacher in the same major, as a class teacher, conducted data research and collected evaluation materials, and obtained the consent of the subjects in advance.

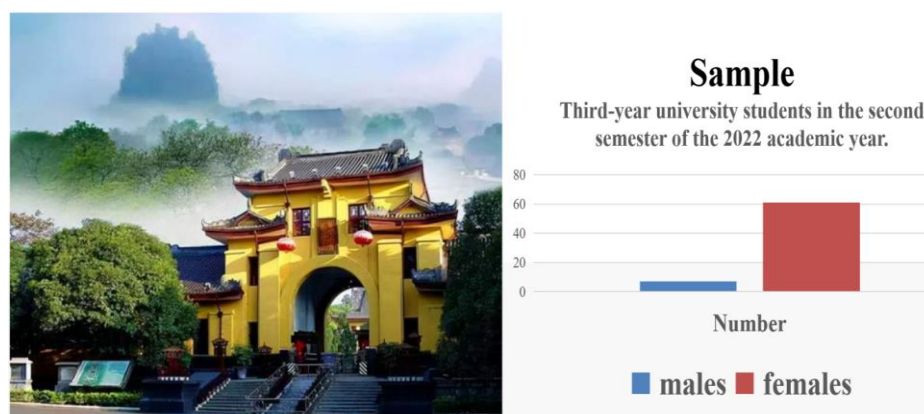


Figure 1 Guangxi Normal University and Research students

The Conceptual framework has been shown in figure 2 below:

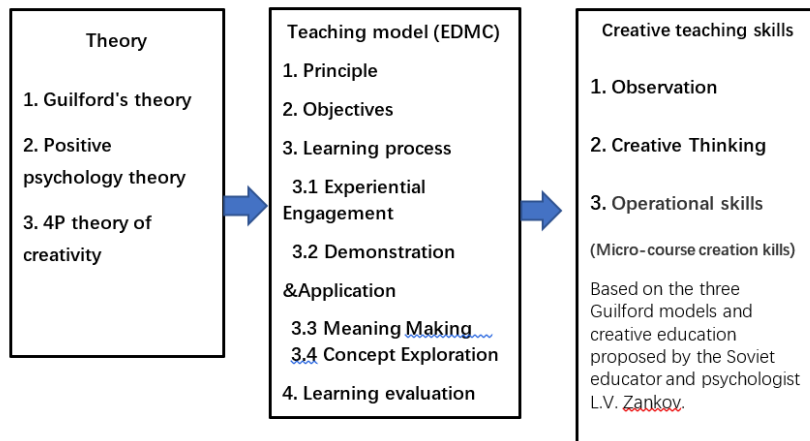


Figure 2 Conceptual framework

5. RESEARCH METHODOLOGY AND RESULTS

Document analysis method, questionnaire survey method, interview method.

Step1: Components of teaching model

Creative teaching skills are critical skills in today's world. Therefore, the experiential learning cycle model cultivates the creative teaching abilities of university normal students and provides a reference for future career development.

The first is the principle of stages. The second is the principle of operability. The third is the principle of effectiveness. The fourth is the principle of controllability. Fifth, democratic principles. Sixth is the principle of openness.

The openness of the experiential learning cycle teaching is combined with the flexibility of university students' thinking, using experiential learning methods to generate new knowledge, new ideas, new methods and new problems. In classroom research activities, students generate sparks of ideological collision through discussions and debates, which effectively stimulates students' desire for knowledge. Its outstanding advantage is that students can choose diversified learning methods to understand and master classroom teaching content based on their own characteristics and interests. Therefore, the experiential learning cycle teaching method gives students more space for independent learning and independent choices, and better promotes students' self-improvement and all-round development.

The visual resources section is organized as follows:

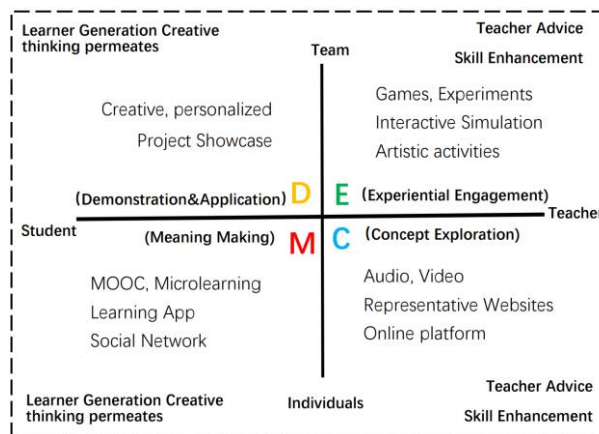


Figure 3 Theoretical model

Following the experiential cycle learning model, we can organize the following 4 major areas.

Quadrant 1: Concept Exploration

Pre-work in learning is very important, and we encourage students to utilize resources such as online platforms, representational websites, audio and video to explore concepts in learning can provide rich learning materials and diverse learning styles.

(1) Watch educational videos: Many online platforms and websites provide a wide range of educational video resources covering a variety of disciplines and topics. You can search for relevant concepts or topics and watch expert presentations, academic lectures or instructional videos to gain a deeper understanding and explore specific concepts.

(2) Participate in online courses: There are many online education platforms such as Coursera, edX, Udemy, etc. that offer a variety of free or paid online courses.

(3) Listening to podcasts and audio courses: By subscribing to podcasts or audio courses on related topics, you can utilize fragmented time in your daily life for learning. These resources are usually provided by professionals or experts in the field and offer in-depth explanations and discussions on specific topics or concepts.

(4) Read blogs and online articles: Many domain experts, academics and educational institutions maintain blogs or online articles to share their insights and knowledge. By searching for blogs or columns on related topics, you can read in-depth conceptual explorations and analysis of ideas.

(5) Participate in online discussions and communities: Join relevant online discussion forums, social media groups or learning communities to share and discuss concepts with other learners and experts. These platforms provide an interactive and collaborative environment that can facilitate conceptual exploration and in-depth understanding.

(6) Utilize online libraries and academic databases: Visit online libraries and academic databases to search for scholarly papers, research reports, and professional publications related to the concepts you are interested in. These resources often provide in-depth scholarly information and theoretical background that can help you explore concepts in depth.

(7) Utilize online learning tools and applications: There are a number of online learning tools and applications available, such as Quizlet, Khan Academy, and others. These tools offer a variety of learning resources, practice questions and interactive activities that can help you consolidate and apply concepts.

Whichever you choose before class, staying curious, actively exploring, and combining different resources and learning styles to gain a comprehensive conceptual understanding and knowledge buildup can be very helpful for creative learning later on.

Quadrant 2: Experiential Engagement

Experiential engagement can be applied to various contexts, including games, experiments, interactive simulations, and artistic activities. Let's explore each of these areas:

(1) Games: Experiential engagement is often utilized in the design of games to create immersive and interactive experiences. Games provide players with opportunities to actively participate, make decisions, and engage with virtual worlds or narratives. By incorporating elements like storytelling, problem-solving, and collaboration, games can offer engaging and meaningful experiences that captivate players and keep them invested in the gameplay.

(2) Experiments: Experiential engagement can be leveraged in experimental settings to enhance participation and data collection. By designing experiments that involve participants in interactive tasks or scenarios, researchers can create a more engaging and immersive environment. This can lead to increased participant interest, motivation, and more accurate data collection.

(3) Interactive Simulation: Experiential engagement is particularly effective in interactive simulations. These simulations allow individuals to actively engage with virtual environments that replicate real-world scenarios or systems. For example, flight simulators provide pilots with hands-on training in a simulated aircraft environment. By interacting with the system and experiencing realistic feedback, participants can develop skills, gain insights, and make decisions within a safe and controlled setting.

(4) Artistic Activities: Experiential engagement can also be found in various artistic activities, such as interactive installations, performances, or exhibitions. These activities aim to create immersive and participatory experiences where viewers or participants become an integral part of the artwork. By engaging with the artwork through their senses, emotions, or physical interactions, individuals can have a more profound and personal connection with the artistic expression.

In all these contexts, experiential engagement focuses on providing individuals with active, participatory, and immersive experiences. By involving participants on multiple levels—cognitive, emotional, sensory—these approaches aim to create memorable and impactful engagements that go beyond passive observation or interaction.

Quadrant 3: Demonstration & Application

Demonstration and application, when combined with a focus on creativity, personalization, and project showcasing, can create powerful and engaging experiences. Let's delve into each aspect:

(1) Creative: Demonstrations and applications that incorporate creativity can captivate the audience and make the experience more memorable. This can involve innovative presentation techniques, the use of multimedia elements, interactive storytelling, or the integration of art and design. By infusing creativity into the demonstration and application process, project showcases can inspire curiosity, spark imagination, and create a unique and immersive experience for participants.

(2) Personalized: Personalization adds a layer of individualization to the demonstration and application of a project. It involves tailoring the experience to the specific needs, interests, or characteristics of the participants. This can be achieved through interactive elements that adapt to individual preferences, customization options that allow users to personalize their experience, or personalized recommendations based on user data. By catering to the individual, project showcases can enhance engagement, create a sense of ownership.

(3) Project Showcase: The purpose of demonstration and application in a project showcase is to effectively present and highlight the features, benefits, and outcomes of a project. A project showcase provides an opportunity to exhibit the project's achievements, innovations, and real-world applications. By integrating creative and personalized elements into the showcase, such as interactive displays, hands-on experiences, or personalized narratives, the audience can actively engage with the project and gain a deeper understanding of its significance and impact.

When combined, these three aspects—creativity, personalization, and project showcasing—can elevate the demonstration and application of a project. By creating a dynamic, personalized, and immersive experience, project showcases can effectively

communicate the project's value, engage the audience at a deeper level, and leave a lasting impression.

Quadrant 4: Meaning Making

The final part of the creative teaching skills model is the display of results, which can be achieved through many platforms. Creative teaching skills, including meaning making, can be applied to various educational approaches and technologies such as MOOCs (Massive Open Online Courses), microlearning, learning apps, and social networks. Let's explore how these elements contribute to meaning making in education.

Step2: Model implementation

Guangxi Normal University has nearly 50000 college students and over 4000 teachers on campus. Its main focus is on cultivating talents who will be engaged in teaching positions in the future. These talents not only need to teach, but also need to serve as class teachers and other moral work. In this research on the teaching mode of cultivating creative teaching skills, the selected course is "Teacher Vocational Skills Training", which is offered by the entire Leilei major of normal universities. The course has been changed from the original 90 hours to the current 68 hours, mainly focusing on practical training. The specific courses for this research are as follows: In this study on the teaching model of cultivating creative teaching skills, the eight teaching topics of "" in the course were selected for research, and the results obtained through testing.

TABLE 1 Mean score of each lesson of 68 students

Topic	Observation skills (Full score =5)		Creative thinking (Full score =5)		Operational skills(Full score =5)		Total	
	X	D	\bar{X}	SD	\bar{X}	SD	\bar{X}	SD
Teaching skills	.28	.73	.96	.74	.87	.60	.37	.69
Import skills	1.74	0.75	2.40	0.99	1.99	0.78	.04	0.84
Observation and explanation skills	1.84	0.66	2.22	0.79	2.06	0.86	2.04	0.77
Teaching method design and selection	2.44	0.66	2.51	0.53	2.25	0.89	2.40	0.69
Teaching activity design skills	2.74	0.91	3.04	0.58	3.19	0.80	2.99	0.76
Teaching and questioning skills	2.41	0.58	2.53	0.61	2.49	0.76	2.48	0.65
Information-based teaching methods	3.04	0.61	2.62	0.49	2.93	0.85	2.86	0.65
Micro course skills	.71	.75	.66	.59	.85	.74	.41	.69

In this study, a survey of 68 students in the e-commerce class of Guangxi Normal University was conducted to verify the impact of the teaching model based on the development of innovative teaching skills in the CEDM experiential cycle on the effectiveness of teaching and learning.

TABLE 1 E-commerce class teaching effectiveness pre-test and post-test paired samples t-tests

Creative teaching components	Test	Mean	S.D	t	df	P-value
Observation skills	Pre-test	2.06	0.73	-14.048	67	.000
	Post-test	3.74	0.77			
Creative thinking	Pre-test	2.84	0.44	-1.816	67	.074
	Post-test	3.03	0.81			
Creative operational Skills	Pre-test	2.06	0.51	-20.539	67	.000
	Post-test	3.97	0.75			
Total	Pre-test	2.32	0.56	-20.539	67	.025
	Post-test	3.58	0.78			

It should be noted from the above data that these results are only based on the test data of this study. For other studies, more information about the test background, specific experimental design, or other relevant information may be needed. In terms of students' creative thinking, it is difficult to improve in eight courses and two months, although many methods can help test subjects improve their creative thinking abilities. However, creative thinking is a complex process, related to many factors, and requires time (long-term time) and practice (long-term persistence and continuous practice) to develop and improve. (The last questionnaire is posted here.)

Step3: Results of effectiveness evaluation and improvement

Guangxi Normal University has nearly 50000 college students and over 4000 teachers on campus. Its main focus is on cultivating talents who will be engaged in teaching positions in the future. These talents not only need to teach, but also need to serve as class teachers and other moral work. In this research on the teaching mode of cultivating creative teaching skills, the selected course is "Teacher Vocational Skills Training", which is offered by the entire Leilei major of normal universities. The course has been changed from the original 90 hours to the current 68 hours, mainly focusing on practical training. The specific courses for this research are as follows: In this study on the teaching model of cultivating creative teaching skills, the eight teaching topics of "" in the course were selected for research, and the results obtained through testing.

Step4: Results of effectiveness evaluation

TABLE 3 creative teaching skill meet the effectiveness criteria

Effectiveness criteria	Result	In conclusion
Normal students' creative teaching skills is higher than before implementation the model	Normal students' creative teaching skill after implement teaching model higher than before statistical significant at .05.	Pass

From table show that the teaching model for creative teaching skill meet the effectiveness criteria. Improvement of teaching models can produce various positive outcomes that benefit both educators and students. This improvement is mainly Principles, Teaching steps, Media & Resources, and Evaluation of this dimension, Objective is set according to the graduation requirements in the talent training program of Guangxi Normal University, so in the improvement, the goal is kept the same. Through the previous graduate students, the teaching model added three research dimensions of innovative teaching skills: Observation Skill, Creative thinking and Creative Operational Skills, In the four steps of

the teaching model, incorporating the innovative teaching skills, the improvement of the teaching model is specifically organized as shown in FIGURE 3 below:



FIGURE 3 Final teaching mode

6. DISCUSSION

The innovative teaching skills model of this study is mainly implemented at Guangxi Normal University in Guilin, Guangxi. After three rounds of optimization, I am very grateful for the cooperation and support from the teacher and classmates. At the same time, I have also received support from Guangxi University and other sister universities. I am also looking forward to applying it to other normal universities.

Creative teaching skills are very important in the cultivation of college students, and are closely related to issues related to creativity in fields such as psychology, sociology, education, and management (Sternberg, R.J. 2000). For over a decade, the Vocational and Technical Teachers College of Guilin Guangxi Normal University in China has collaborated with various vocational schools both inside and outside the region to cultivate vocational teacher qualifications. This study has developed a new teaching model to enhance the creative teaching skills of university normal students in teacher education training courses. This study explores creative teaching skills and explores them from three parts: Observation Skills, Creative Thinking, and Creative Operational Skills. With the development of creative teaching models, specific examples are used to illustrate the practical exploration of teacher education courses for normal students based on the development of creative teaching models. The implementation of creative teaching skills in teacher education courses is studied and the development model is used to achieve three optimizations.

The process of globalization requires a large number of outstanding international talents. Stephens pointed out that international talents should have strong cross-cultural communication and cooperation ability, broad global vision, strong creative consciousness and good creative skills and other qualities (Stephens, 2009). The state has promulgated a series of documents and policies to effectively guarantee the improvement of the teacher-training students' innovative skills. The essence of education is innovative teaching and creative thinking. The curriculum standards in many countries such as Germany, the United Kingdom, Thailand and China all point to the requirement of "creative ability". In order to improve the awareness of innovation, relevant innovation courses have been opened.

Amabile and Hennessey believe that creativity is one of the key factors driving the development of civilization (Amabile, TM 1996). Since the 1980s, when the U.S. National Commission on Excellence in Education (1983) released the report "The Nation is in Crisis: The Imperative for Educational Reform," a new wave of educational reforms has been set off in various countries, and the standard of talent cultivation for Chinese

university students has been further raised. Creative education combines professional education with skills education, focusing on the cultivation of specialized and professional talents. The "skills" in the competency standard highlights the attributes of today's education, i.e. creative teaching skills, strengthens the process of competency cultivation, updates and optimizes the education and teaching mode of talent cultivation, and develops the cultivation mode of innovative teaching skills. The development of this model requires the basic formation of a new form of education and teaching centered on teacher training students, a significant improvement in the quality of practical teaching. To establish an interoperable talent cultivation pathway for teaching and learning of creative skills.

7. CONCLUSION

This paper puts forward the model of creative teaching skills cultivation, establishes a bridge between educational practice and creative teaching skills cultivation, and connects a new model of practical education for teacher trainees in teacher training colleges, which can effectively promote the reform and development of teacher education programs. Creative teaching skills of college teacher trainees are required by the current situation, and in the creative teaching practice of college teacher trainees, we take the training of teacher trainees as the orientation, face the diversified problems of education and teaching practice, carry out the reform and innovation, set the goal, and make efforts from the teacher education course itself, and try to form the grid management pattern of "resource sharing, cooperation and mutual assistance, synergistic promotion, compartmentalized management, and scientific integration". We are striving to form a "resource sharing, cooperation and mutual assistance, collaborative promotion, compartmentalized management, scientific integration" grid management pattern, to promote the growth of teacher education students to provide a platform for development, and to lay a solid foundation for the growth and success of the students.

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