HOW TO CULTIVATE THE INNOVATIVE THINKING OF OFFICE MANAGEMENT STAFF OF GUANGXI VOCATIONAL AND TECHNICAL COLLEGE

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ABSTRACT

Innovation is the soul of a country and a nation's progress and an inexhaustible driving force for its prosperity. The key to the success of the reform and innovation in colleges and universities lies in the management, whether the staff is innovative, whether they have innovative thinking and the ability to use innovative thinking. This paper takes Guangxi Vocational and Technical College as an example, takes the cultivation of innovative thinking of office management staff as the theme, adopts literature review, interview, questionnaire survey, statistical analysis and other methods to conduct research. Through the analysis, the author puts forward six factors that affect the cultivation and formation of innovative thinking, and makes an in-depth analysis around these six factors, and then summarizes the cultivation of innovative thinking of office management staff in Guangxi Vocational and Technical College and puts forward effective measures. This paper aims to put forward effective strategies for training office management staff with innovative thinking, and hopes to improve work efficiency, create more value for the school, and speed up the high quality development of the school by training employees with innovative thinking.

Keywords: Innovative Thinking, Office Staff, Management

ACKNOWLEDGMENT

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CHAPTER 1
INTRODUCTION

1.1 Research Background

Quality is the key word of higher education in the world today. The Chinese government proposes that higher education should develop towards connotative development, and the core of connotative development is also quality. To achieve high-quality development, we must carry out innovation. Innovation is the soul of a country and a nation's progress and an inexhaustible driving force for its prosperity. "Innovation is recognized as one of the most powerful engines of organizational growth. Due to the characteristics of knowledge economy, increasingly fierce global competition, highly unstable market and rapid diffusion of technological change, innovation is a major determinant of organizational success" (Manso, 2017). This means that higher education has sacred mission, arduous task and great responsibility. In order to implement the national strategy on higher education, colleges and universities should realize the importance of innovation.

The development of The Times has put forward higher requirements for school administrators. With the increase of colleges and universities' competitive pressure and autonomy of running schools, the role of administrative work is becoming more and more obvious, and the innovative thinking concept in the administrative work of colleges and universities has been accepted by more and more colleges and universities, and the innovative thinking is playing an increasingly important role in the administrative work of colleges and universities.

Innovative leadership and management is critical for any organization, including higher education institutions, as it enables employees and students to be more creative and productive. In the modern global market, the growth and development of organizations depend on the degree of innovation of managers and leaders (Alondererene & Majauskaite, 2016). In China, administration is an important task of university management. Therefore, we must pay attention to the group of innovative administrative personnel, because training innovative leaders and management can realize the effective coordination of various affairs in colleges and universities, create a good environment for teaching and research, and improve the

overall management level of colleges and universities.

Since entering the new era, with the adjustment of China's talent training strategy, the scale of college enrollment has gradually expanded. In this situation, the development of colleges and universities is faced with great opportunities on the one hand and great challenges on the other hand. Higher education institutions are facing new challenges because of the changing environment, global competition among universities, and the need to respond to changes in the global market. Therefore, educational leaders and managers must implement innovations to help them maintain and improve efficiency (Sauphayana, 2021). In the face of new opportunities and challenges, university office management staff must have the spirit of pioneering and innovation.

The key to the success of the reform and innovation in colleges and universities lies in the management, whether the staff is innovative, whether they have innovative thinking and the ability to use innovative thinking. Innovative thinking influences the performance of employees in professional fields related to new developments, new technologies, people management and organizations. Due to innovative thinking, employees can not only make correct decisions and generate unique ideas, but also implement them (Batovrina, 2016). In addition, some experts have pointed out that employee creativity is an important source of organizational success and competitive advantage. Innovative and creative managers or employees who think outside the box are able to respond immediately to change and take advantage of new opportunities that open up for them.

It can be seen that only by constantly cultivating office management personnel with innovative thinking can the administrative management level be improved, the standardization and systematization of personnel training and scientific research projects be maintained, and the comprehensive competitive strength of the school be improved. Therefore, in order to realize the connotative development of colleges and universities and improve the work performance and level of colleges and universities, we must pay more attention to and train the innovative thinking of office management staff.

1.2 Research Question

The research focuses on the following questions: What are the factors that affect innovative thinking? What strategies can Guangxi Vocational and Technical College use to train the innovative thinking of office management staff?

1.3 Research Objective

Taking Guangxi Vocational and Technical College as an example, this paper studies how to cultivate innovative thinking of office management, and discusses the influencing factors of the formation of innovative thinking of office management. Put forward effective measures for the training of office management personnel of Guangxi Vocational and Technical College, improve the work efficiency of staff by cultivating innovative thinking, create more value for the school, and speed up the high quality development of the school.

1.4 Research Significance

In terms of office management staff in colleges and universities, researchers pay more attention to the problems of working methods, and less research on the cultivation of innovative thinking staff and in the study of innovative thinking, more directly from the innovative thinking and work management, innovative thinking in the application of office work and other suggestions, less from the innovative thinking of office management staff. This paper hopes to put forward effective strategies on how to train office management staff with innovative thinking in Guangxi Vocational and Technical College.

1.5 Research Content Framework

This study is carried out from the following six aspects:

Chapter 1 Introduction. This paper expounds the background of this research, puts forward the research question, research objective and research innovation.

Chapter 2 Literature review. Read literature related to your research topic. On this basis, summarizes the theoretical basis of this research, namely the theory of innovative thinking and other concepts.

Chapter 3 Methodology. This paper introduces the steps of hybrid method design, summarizes the literature review and interviews, and establishes the conceptual framework. Design questionnaires and collect data.

Chapter 4 Data analysis. The results of the questionnaire are statistically analyzed, and the factors affecting the improvement of office management staff innovative thinking are systematically analyzed.

Chapter 5 summary and suggestions. This paper summarizes and discusses the research results, and puts forward effective strategies for how to cultivate innovative thinking of office management staff in Guangxi Vocational and Technical College, and provides enlightenment and suggestions for future research.
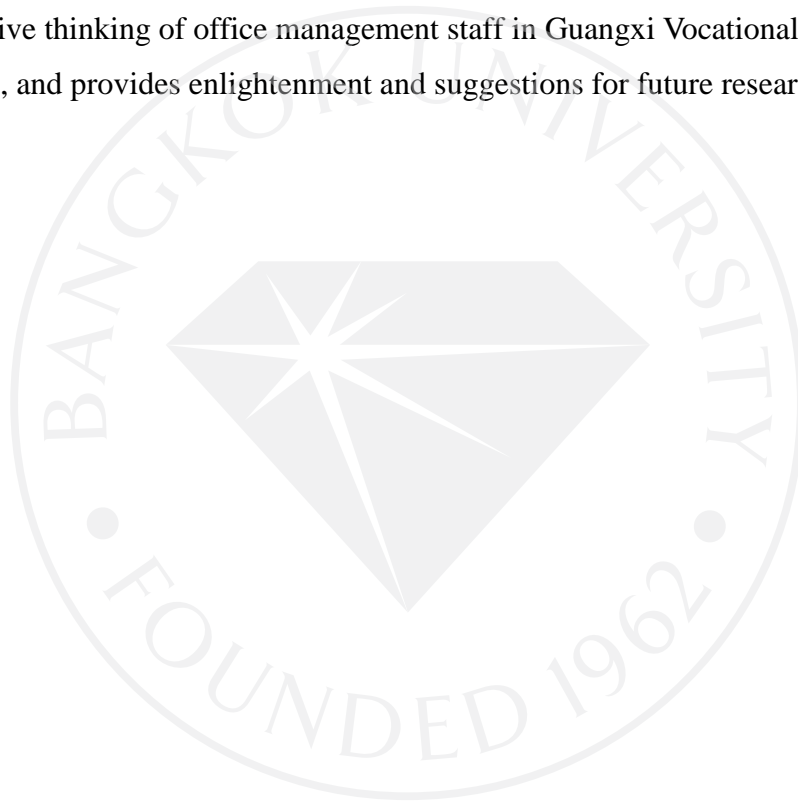
CHAPTER 2
LITERATURE REVIEW

2.1 Definition of Innovative Thinking

In terms of innovative thinking itself, it is not a new thinking, but has existed since ancient times with the progress of society, the strength of innovative thinking is gradually strengthened. Innovation as a theory can be traced back to Harvard University professor Schumpeter's introduction to Economic Development in 1912. According to Professor Schumpeter's innovation theory, innovation means the creation and introduction of new production methods, new products, new organizational forms, new sources of goods, new markets, etc. When the old source with advantages is destroyed and replaced by new sources, the rest period will be interrupted due to basic "shock" or discontinuity. Such enterprises that create opportunities through "shocks" continue to gain positive profits in the next relatively static period, that is, creative destruction (Schumpeter, 1942). Innovation is a process of "creative destruction" that continuously breaks the existing equilibrium.

Creative thinking can trigger atypical but insightful ideas that can question common assumptions and suggest breakthrough solutions (Tripathy, 2018). Although the cultivation of employees' innovative thinking has received a lot of attention in organizations, such as the cultivation of innovative thinking in IT companies (Aragaki & Tomina, 2018), Higher education influences the development of managers' innovative thinking, of course, there are also studies on the cultivation of innovative thinking and problem-solving ability in financial service organizations, but there are few studies on the cultivation of innovative thinking among office management staff in universities. Admittedly, the cultivation of innovative thinking is just as important in a business setting as it is in university office management. Based on this understanding, the author thinks that the progress and development of university management cannot be separated from the innovation and reform of the core department of university office.

Innovative thinking is the innovation of thinking, without new thinking, there is no innovation. In particular, we should have the courage to break through the inherent thinking framework and way of thinking to develop new ideas (Zhang, 2013).

The key to fully understanding the term "innovative thinking" is to understand the concept of innovation itself. Some experts point out that innovation is the successful implementation of creative ideas within an organization, and they believe that creativity itself does not lead to innovation. It must be combined with a favourable organizational climate to achieve successful innovation (biwulu, Yunus, Ibrahim, & Zuruz, 2019). Also, understand the relationship between creativity and innovation. In 2014, there was an innovation project that has been funded with support from the European Commission. It was pointed out that there is a close relationship between creativity and innovation. Creativity is usually used to refer to the behavior of generating new ideas, methods or actions. Innovation is the process of generating and applying creative ideas in a specific environment.

Innovative thinking is the core of human creativity and the highest form of thinking, as well as the most active, active and fruitful form of thinking. It includes not only the thinking process of new discoveries and inventions, but also the thinking activities with novel and unique ideas in thinking methods and techniques, as well as some conclusions and opinions. Innovative thinking has the following characteristics: first, the reflection of traditional thinking. The premise of innovative thinking is to reflect on and criticize the old. Look at the work of our predecessors with suspicion and criticism. Innovative thinking must be reflective and critical. Otherwise, it's not innovative thinking.

Innovative thinking is a positive in the negative , in the negative development process of pioneering forward, second, realism and practicality. Innovation is neither delusion nor fantasy , but objective activity with a purpose. Since innovative thinking takes practical innovation as the ultimate orientation, innovative thinking itself and its theoretical results must be realistic, both from the reality and must be able to return to the reality, Third, the transcendence of existing things. Innovative thinking is to surpass our predecessors on the basis of our predecessors and surpass ourselves in our own consistent practices. True innovation does not merely surpass tradition, but involves the solution of tradition. Without a long tradition as the basis of thinking, innovation is impossible.

In addition, the understanding of innovative thinking, but also pay attention to the difference between some similar concepts, such as the concept of creative

thinking, and innovative thinking is very similar. So what's the difference? "Innovative thinking is an art, a substantive, far-fetched art, a dynamic process that produces knowledge and cognitive obedience" (Tripathy, 2018) Innovative thinking is a person's ability to generate thoughts and create innovative knowledge, that is, to open one's consciousness on the basis of self-cognition and self-perfection. The decisive difference between innovative and creative thinking is application. Innovative thinking is results-oriented and highly relevant to the individual's professional activities and training. Thus, it can be defined as a special type of thinking that facilitates the creation and implementation of new tangible and intangible products in specific areas of human activity; this is inseparable from the ambition and intention of those involved in innovative activities to develop into professionals (Batovrina, 2016).

In short, in this article, the definition of innovative thinking and an MBA, a think-tank, is defined as similar to Wikipedia, innovative thinking is a kind of Groundbreaking thinking activity, is to develop new areas of human knowledge, create the new results of thinking activity of human knowledge, its characteristic is inventing new technology, form new ideas, decisions, and put forward the new scheme to create a new theory.

2.2 Factors Affecting the Innovation of Office Management Staff

In order to cultivate employees' innovative thinking, it is important to explain the factors that influence innovative thinking. The thought process is no different from creative thinking. The ability to think creatively is a harbinger of a successful business climate and a sign of achieving life goals (Tripathy, 2018). Employee innovation is a complex phenomenon, which is caused by various factors, including personal factors and background factors (Anderson, Potonick, & Zhou, 2014; Oldham & Cummings, 1996). On the basis of literature review, this study summarizes the factors affecting the formation of employees' innovative thinking from six dimensions. One is the work environment. Second, organizational culture. The third is seminar (training). Fourth, personal motivation. Fifth, information technology. Sixth, organizational safeguard measures.

2.2.1 Work environment

Workplace in higher education institutions is a key factor affecting creativity (Azeem, Mataruna-dos-Santos, Moalla, & Kaleem., 2019). Compared with factors at the individual level, environmental factors include work and team, and organization-related factors provide boundaries for employee innovation (Fay, Shipton, West, & Patterson, 2014; Naranjo-valencia, 2017; Stock, 2015). The creative work environment is an important factor in an organization for the development of new ideas. Creative work environments can be characterized by the degree of freedom they offer, organizational energy, challenges at work, trust among colleagues and openness to new ideas, collaboration, and the degree to which employees are free to make mistakes while trying out ideas. Therefore, the creative work environment influences the development of individual ė ability and promotes its application while creating organizational value (Markeviciute & Jucevicius, 2013). Because it aims to manage organizational change, develop new ideas, and form new attitudes toward understanding an organization's competitive advantage. In addition, personalized office environment cannot be ignored. Change office design to inspire creative and free atmosphere (Batovrina, 2016).

Innovative thinking is an important aspect of the familiar mechanism of modern university governance practice, and it is a scientific thinking carried out by university administrators in order to effectively realize organizational goals, scientific speculation, scientific decision-making, regulation and control behavior. The progress and development of modern university governance is the precipitation and materialization of innovative thinking, and also the highest embodiment of the transformation of modern university governance innovation process to practice. Innovative thinking is not only a necessary quality for the governance of modern colleges and universities, but also an indispensable important thinking process, which runs through the whole process and every process of the governance practice of colleges and universities (Wu, 2010). As a comprehensive department of the university, as the hub and bridge to ensure the normal operation of teaching and administrative work, the university office is one of the important processes in the whole university governance practice, and it should be innovated everywhere and constantly in practice. The management innovation of university office is the

necessary prerequisite to realize the modernization of higher education, which is not only conducive to the promotion of higher education to social and economic development, but also conducive to the establishment of scientific development concept and the realization of the rapid, healthy and coordinated development of higher education.

Office is a window, a unit of the overall quality and image, to improve the efficiency of office work and management, "integration" of the office personnel division of Labour and individual in a number of office daily affairs at the same time often have higher request for the coordinated ability, in this regard, the office worker is necessary to improve the ability of innovative thinking, Efforts should be made to bring the art of coordination into play in the daily affairs and auxiliary work of the office, strengthen the role positioning of auxiliary work, constantly adjust self-psychology and self-behavior, coordinate work means flexibly, and give better play to the overall role of the office (Ru, 2007).

As a result, it can be seen that creative work environment is creative ability and organizational value creation, the connector between the work environment to improve creativity and innovation play a crucial role, to cultivate employees' innovative thinking, must pay attention to employee work environment, including the whole campus environment of universities, and personal office work environment.

2.2.2 Organizational culture

Organizational culture is closely related to the cultivation of employees' innovative thinking. It can be said that organizational culture is the most important factor, because organizational culture will have a significant impact on the creativity of individual employees. Organizational culture and organizational climate have a vital impact on education, management and leadership innovation. Universities are centres of research and innovation; therefore, they should demonstrate a high level of innovation and leadership. According to organizational culture is a major determinant of the innovation level of university education management and leadership.

To be considered an organizational culture, it needs to have three characteristics: common, widespread and implicit. Common means that organizational culture must be something shared by all members of an organization, such as a common set of assumptions, beliefs, values, behaviors, norms, expectations, language

styles, and so on. Pervasive presentation culture permeates multiple levels of an organization and is applied in a consistent manner across a wide range of organizations. An implicit aspect is to say that, while being an unwritten rule and silent language, organizational culture can imply appropriate attitudes and behaviors rather than directly expressing them (Groysberg, et al., 2018).

All initiatives need to develop a culture of innovation and creativity in the organization (Zainal, 2018). Organizational culture has positive and negative effects on employees' innovative work behavior. According to cultural practices carried out by organizations, culture can either stimulate or hinder employees' innovative ability (Ngo, 2018). From this we can see that organizational culture plays a very important role in the cultivation of innovative thinking of employees. Therefore, as a university, we should also pay attention to the construction of organizational culture.

2.2.3 Seminar (Training)

In enterprise environments such as financial services environments, special training in creative thinking is necessary to succeed in the workplace (Tripathy, 2018). Appropriate creative and innovative thinking and problem-solving abilities can be developed through workshops on creativity and innovation (Groysberg, Lee, Price, & Cheng, 2013). As for the research that training can improve the innovative thinking of employees, there have been many studies in the last century. "When organizations want to equip employees with creative and innovative thinking and problem-solving skills, training in the field of creative problem solving is usually found to be most effective" (De Bono, 1995; Von Oech, 1990; Williams, 2001).

With the rapid development of society, most organizations, including government departments, attach great importance to innovation training, because it is the fastest way to improve employees' innovation ability in the short term. On the one hand, training speeds up knowledge transmission, on the other hand, it also promotes peer communication, and in the communication, it is easy to stimulate employees' innovation. Essentially, the world we exist in operates on the basis of communication (Tripathy, 2018).

In order to make the organization more creative, it is essential to keep trying to improve communication between teams (Tomina, 2018). Therefore, organizing or participating in special training or seminars on innovation and paying attention to

effective communication are important ways to effectively improve employees' innovative thinking and innovation ability.

2.2.4 Personal motivation

With the rapid development of economy and society, there is an urgent need for a post of "high-level, compound talents" office workers must adapt to the needs of reform and development, and strive to do not only can do things and give advice, not only pay attention to play the role of assistant but also pay attention to play the role of staff (Ru, 2007). At present, the office staffs do a good job in handling affairs and playing the role of assistant, but relatively lack of innovative thinking to stand in the overall point of view to give advice. Give full play to the ability of good staff function, work often in a passive role, generally when problems occur, will seriously think about the method to solve the problem, only when leadership points out what should be improved for improve the method of some work or work, to pay attention to these problems, can really actively according to the law of development of forward thinking, innovative thinking, arrange work in advance , there are still few people who take the initiative to realize advanced service and play the role of excellent "staff". From this perspective, this study believes that personal motivation is also an important factor affecting the formation of innovative thinking.

Intrinsic motivation refers to the motivation derived from the task itself. Individuals can be more creative when experiencing positive influences (enthusiasm and elation) (Ohly, 2018). The formation of innovative thinking of employees is closely related to personal motivation, and how to stimulate individual intrinsic enthusiasm to increase innovation is a factor to be concerned. Owusu-agyeman (2019) found that managers of higher education consider participation, enthusiasm, information flow and communication use as key factors to enhance creativity. Of course, there are also some incentive factors, such as appropriate material or spiritual rewards, which can also stimulate an individual's sense of innovation. Extrinsic rewards for creative performance may foster creativity by raising creative requirements (Ohly, 2018). This is in terms of external stimulation of personal enthusiasm.

On the other hand, personal expertise and motivation are also essential (Serrat, 2009). The office plays the role of the link between the preceding and the

following, the coordination between left and right, and the link between inside and outside, which determines that office workers should give full play to their own wisdom and wisdom. Always innovative thinking and staff awareness into the daily affairs, will be able to handle things, will think, at the same time, pay attention to search for all kinds of information, timely leadership to provide accurate and reliable information, for the leadership to make decisions to provide reference. Innovative thinking is results-oriented and highly relevant to individual professional activities and training (Batovrina, 2016). Personal professional activities, the premise is to have a certain professional knowledge. Therefore, having certain professional knowledge, especially the knowledge of innovation, is a factor that affects the formation of innovative thinking.

The key to the application of innovative thinking in the actual work of the office is that the staff engaged in office work must enhance their innovative consciousness and innovation ability. If the office personnel have outdated ideas, lack of innovation consciousness and innovation ability, can't go beyond the traditional way of thinking and established patterns of interests, habits and practices, it is impossible to meet the challenges of the era of knowledge economy, will be eliminated by the era. As an office worker, we should not only master the routine work rules and experience, but also have the spirit of exploration, so as to better create a new situation of work and adapt to the requirements of the development of The Times (Ru, 2007).

In short, individuals with certain professional and technical knowledge and managers with certain measures to stimulate employees' intrinsic motivation, enhance their enthusiasm for innovation and arouse their curiosity are conducive to the formation of individual innovative thinking.

2.2.5 Information technology

Under the new situation of the rapid development of mobile Internet, each institution should also establish a standardized, unified and informationized office service system to ensure that it can provide customers with better and faster services and improve the overall quality and effect of office service management. Entering the new era, strengthening information construction is the direction of continuous efforts of all organizations, because the use of information technology can save a lot of time,

giving employees more time and space for further innovation. The rate of adoption and use of technologies, such as education management information systems, Improve the innovation in HEIs (Sauphayana, 2021). Information technology is closely related to process, standardize some work processes, often avoid staff detour, more efficient and accurate completion of work. Innovation is often associated with the process of implementing useful ideas to create value-added products, services and processes in an organization ((Aragaki & Tomina, 2018). But in reality, the application of information technology in colleges and universities is not very satisfactory. The main problems are: first of all, hardware construction, office equipment and facilities of some colleges and departments are relatively backward. Secondly, in software construction, there is no application of advanced software system, the use efficiency is low, or the software function is mainly file transfer, and the role of information exchange, sharing and collaborative office is not fully played. Finally, professional information management personnel are not enough, usually held concurrent posts by other office staff, which cannot guarantee the level of information construction in terms of time and technology (Du, 2019).

The application of modern management technology in university office management is not universal, and the scientificity and flexibility are poor. With the rapid development of information technology, information, an increasingly large amount of data, the traditional information system has been difficult to meet the needs of the development of the current, and the talent training base of university, more should strengthen the reference of information technology, so as to establish a more scientific data analysis, processing and management system, let the office management work more efficient, However, due to the lack of information technology talents in many colleges and universities, and the lack of attention to the cultivation of staff's information technology level in daily work, the application of modern management technology is not enough.

Therefore, colleges and universities should speed up the construction of information, through the construction of information, to further promote the innovation ability of college staff, at the same time, to promote the optimization of work process with information, improve work efficiency.

2.2.6 Organizational guarantee

In terms of organizational guarantee, studies have shown that organizational leaders and organizational systems are important guarantees for the formation of employees' innovative thinking. On the one hand, as a leader of higher education is an important part of office management, his words and deeds will have a great impact on employees. Research results from several countries show a strong positive correlation between increased innovation and better educational management and leadership (Sauphayana, 2021). Innovative leadership and management is critical for any organization, including higher education institutions, as it enables employees and students to be more creative and productive. In the modern global market, the growth and development of organizations depend on the degree of innovation of managers and leaders (Alondererene & Majauskaite, 2016). Strong leaders can provide a strong guarantee for employees to innovate. For example, leaders can allocate tasks through effective management methods to improve the understanding level of employees and promote the formation of innovative thinking of employees. Leaders can also point out the direction for employees and guide them to maximize their potential and improve work efficiency Owusu-agyeman (2019) found that transformational leadership theory illustrates joint operation through behavior, emotion and contingent influence, providing an enabling environment for higher education administrators where they can create new work processes and ideas. Some research results show that leadership role is an important factor in the development of employee innovation practice. Stimulate innovative approaches at work. This will motivate employees to face challenges and find creative solutions. A leader is an individual who influences the goals, motivations, and activities of others. They often encourage transitions to achieve existing goals and new ones. "In times of fundamental structural change, only 'change leaders' survive because they are able to think outside the box and their mindset helps them to respond immediately to change and take advantage of new opportunities that open up for them".

On the other hand, to cultivate employees' innovative thinking, colleges and universities should provide complete institutional guarantee, especially the establishment and improvement of personal growth mechanism, so as to ensure that there are corresponding systems to guarantee employees' various growth stages. In the

process of changing the organizational control system, employees are endowed with more decision-making autonomy and adopt democratic leadership style (Ekaterina Batovrina, 2016). From this point of view, in the process of system formulation, it is necessary to ensure that employees' autonomy can be realized. But at the present stage of enterprise office service management level, in the actual work process, there are still related to the management mechanism is not perfect and other problems, which to a large extent affects the smooth development of office service work. In addition, in the actual development process of enterprises, managers often pay attention to the improvement of economic benefits of enterprises while ignoring the importance of office services, which makes relevant rules and regulations unable to be effectively implemented in practical work, thus affecting the efficiency of office services.

Anyhow, colleges and universities of leadership to a great extent, affects the education, the leaders to improve their leadership skills, at the same time establish and improve the employees' personal growth mechanism, and then through their own leadership and the system safeguard, guide and inspire other management personnel training to form the innovative thinking, thereby improve work efficiency.

2.3 Conceptual Framework

Based After reviewing and analyzing relevant literature, the researcher developed the conceptual framework diagram 2.1 of this study.

Figure 2.1: Conceptual Framework
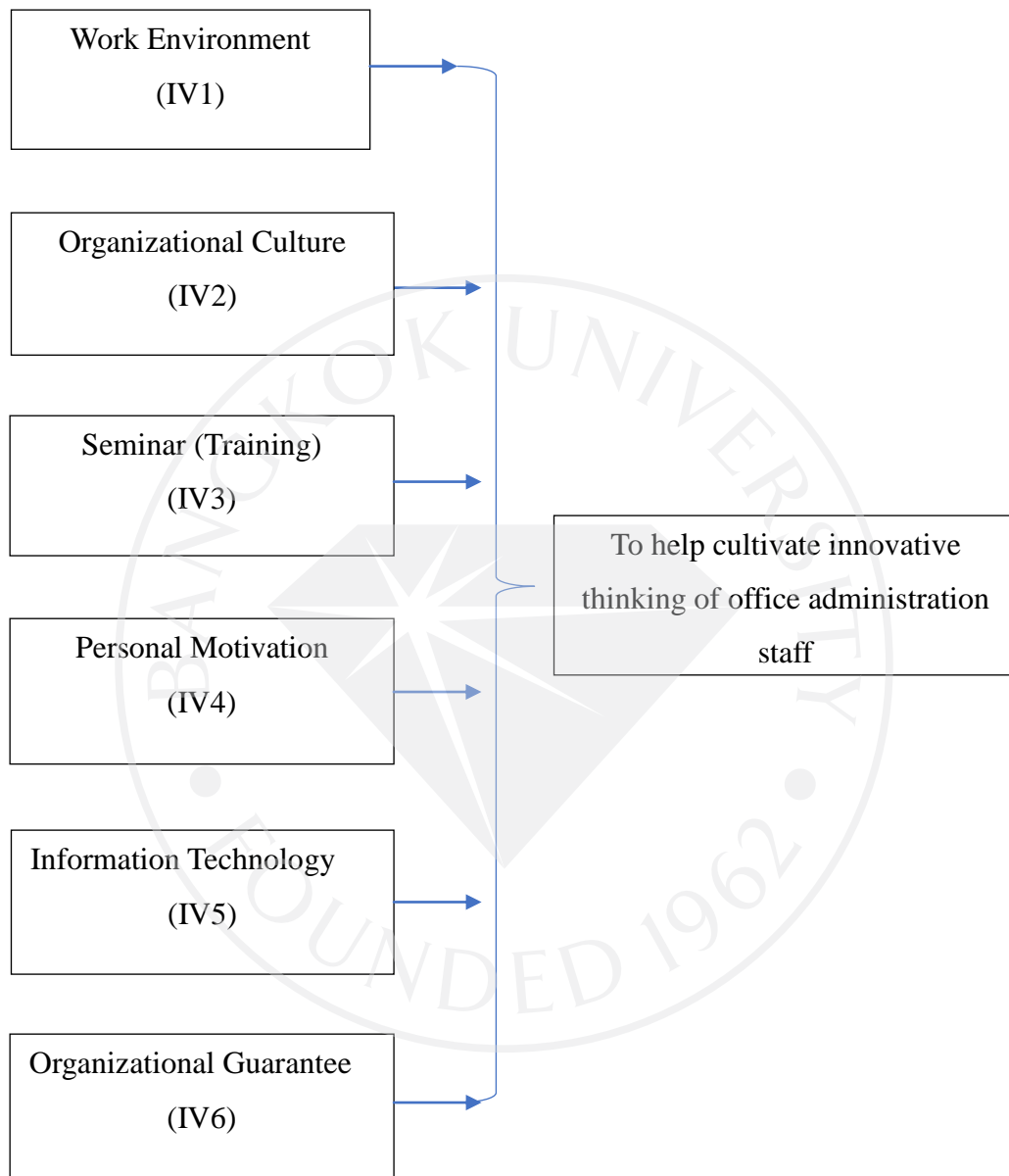
According to the results of qualitative research, the specific influencing factors of each variable in the conceptual framework can be further determined.

Table 2.1: Variables in the Conceptual Framework

Category	Variable
Work environment (IV1)	Campus environment
	Office environment
Organizational culture (IV2)	School spirit
	School Philosophy
	School Culture
	Team diversity
Seminar (training) (IV3)	Seminar
	Training
Personal motivation (IV4)	Personal intrinsic motivation
	Communication skills
	Professional skills (knowledge)
Information technology (IV5)	informatization
	The working process
Organizational guarantee (IV6)	Reward system
	Personal growth mechanism
	Leadership by department heads

Table 2.1 shows the variables that influence the formation of innovative thinking among office workers.

CHAPTER 3
METHODOLOGY

3.1 Research Design

This research adopts the mixed research method of literature research, investigation and qualitative research plus quantitative research. Figure 3.1 depicts the research process of the exploratory hybrid approach.

This paper firstly qualitatively studies the factors affecting the formation of innovative thinking of office staff, and then quantitatively analyzes the phenomena in the qualitative discussion. Finally, based on the integration of qualitative analysis and quantitative analysis data, the corresponding conclusions are drawn.

Figure 3.1: Research Process of the Explorative Mixed-method
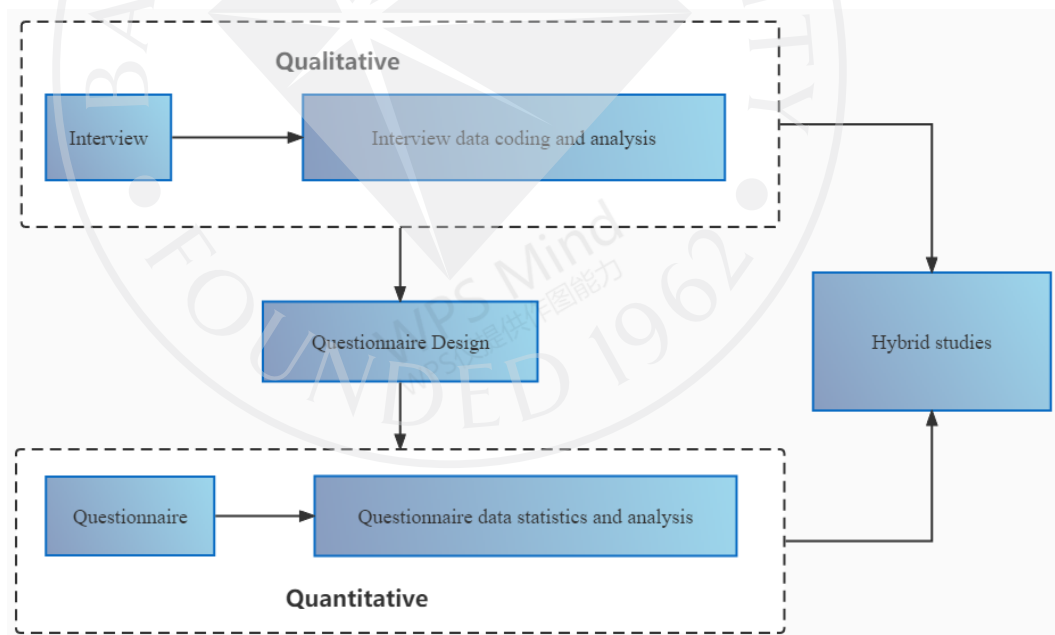
According to the research method, in order to further clarify the research process, the researcher formulated 7 research steps, as shown in Figure 3.2.

Figure 3.2: Study Process
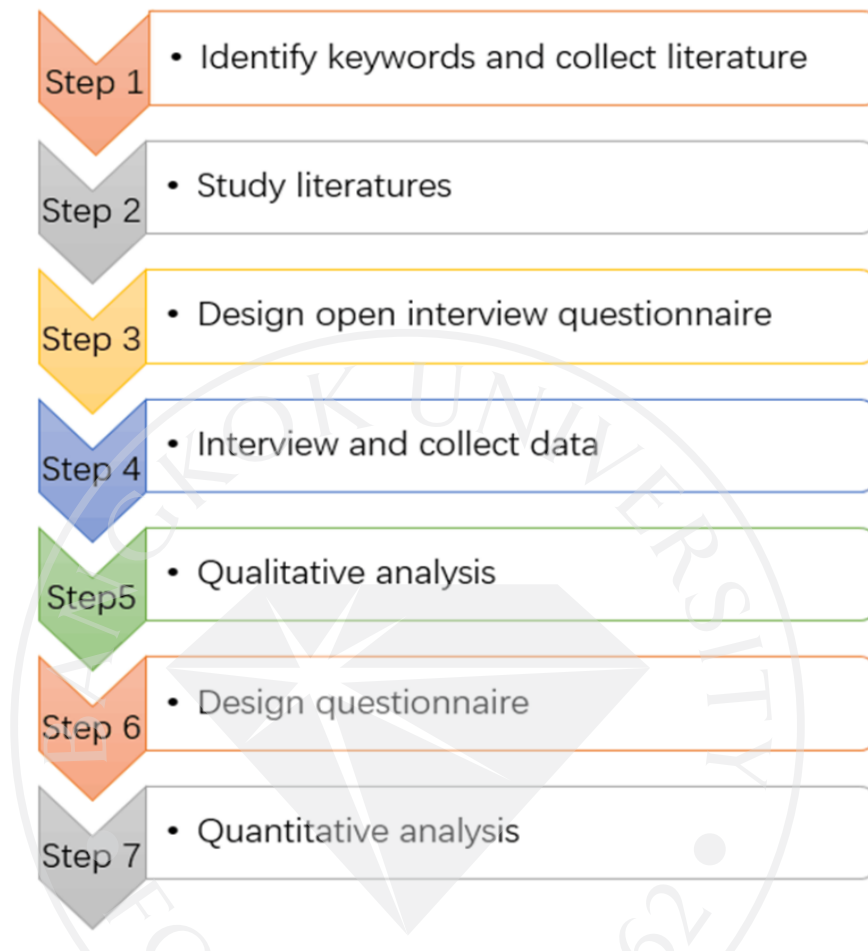
        1) Identify keywords and collect literature. Identify the keywords which related to the research topic and search the literature from the Internet or academic journal network according to the keywords.

        2) Research literature. Through literature research, understand the factors that influence the formation of innovative thinking of office workers, how do these factors affect them? What are the positives? What are the obstacles? How can we develop employees with innovative thinking? In this process, variables such as environment and organizational culture can't be ignored.

        3) Designing interview questionnaire. According to the results of literature study, designing a interview questionnaire in which composed of open questions.

4) Interview and collect data. Taking the relevant staff of Guangxi Vocational and Technical College as samples, the face-to-face interview was conducted with reference to the interview questions, and the interview content was sorted out.

5) Qualitative analysis. After sorting out the interview records, find out the key words in the interview records, and summarize and classify the literatures by keywords. For example, the impact of the work environment on the innovative thinking of administrative staff, the impact of the formation of innovative thinking on the work performance, the understanding and training expectation of employees to innovative thinking, the importance of the school to employees innovative thinking, etc. Finally, a conceptual framework of research objectives is established according to the information provided by relevant literature.

6) Design quantitative questionnaire. According to the conceptual framework of qualitative research, the variables of cultivating innovative thinking of office management staff are determined, and the questionnaire used in quantitative research is designed according to the variables.

7) Quantitative analysis. Questionnaire star online survey software was used to issue questionnaires and collect data and PSPP tool was used to analyze the data.

Qualitative analysis data were obtained from the open interview of Guangxi Vocational and Technical College. A questionnaire survey was conducted among 209 respondents to obtain quantitative analysis data, including 107 administrative positions and 102 full-time teachers. From the perspective of gender, there are 106 male employees and 103 female employees.

3.2 Sampling Selection

This study adopts a mixed research method consisting of qualitative method and quantitative method. Mixed method research is different from qualitative and quantitative research in that it tries to use both qualitative and quantitative research approaches comprehensively, emphasizing pragmatism and maximizing research objectives.

3.2.1 Literature Research

According to the research theme of this study, relevant literatures were retrieved and downloaded from academic journal network by keywords related to the research theme, such as innovative thinking, innovative thinking, innovative tools, innovative management culture, and higher education management innovation. Then, the literature was summarized and analyzed in depth. Finally, the research results of each literature were summarized and classified to determine the variables related to the research topic, and the interview questionnaire of this study was designed based on this. The research results of relevant literature are shown in Table 3.1.

Table 3.1: Related Literature Research Results and Variables

Variables in literature review	The author	Year	The title	The research conclusion	Interview questions
Work environment	Imantė Markeviciute, Giedrius Jucevicius	2013	The role of creativity in organizational value creation: creative competencies in different organizational contexts	Creative capacity is usually enhanced through learning, supporting individual and team creativity, and creating an organizational environment that encourages creative behavior.	1. Do you think the work environment has a great influence on the formation of innovative thinking? 2. What kind of environment do you think an organization should provide to foster individual creativity?
	InnoWork	2014	Project Title: Towards a More Innovative Workplace	Organizations must recognize the creative members of the workforce and provide the necessary environment and conditions for creativity.	

Table 3.1 (Continued): Related Literature Research Results and Variables

Variables in literature review	The author	Year	The title	The research conclusion	Interview questions
Organizational culture	Phuong Ngo	2018	The impact of organizational culture on employee innovativeness	Factors that influence organizational culture and employee innovation, and how these factors influence employee innovation.	3. What elements of organizational culture do you think affect employees' ability to innovate? 4. How do you think organizational culture affects employees' innovation ability? 5. Do you think complex or simple work encourages creative behavior more? Please explain. 6. Do you think the school values innovation at present?
	Habib Gul	2021	Leadership Styles and Job Complexity on Innovative Work Behavior: The Roles of Power Distance, Creative Self-Efficacy and Passion	The results of this study demonstrate the relationship between job complexity and innovative work behavior.	

(Continued)

Table 3.1 (Continued): Related Literature Research Results and Variables

Variables in literature review	The author	Year	The title	The research conclusion	Interview questions
Organizational culture	Mitashree Tripathy	2018	Role of creative thinking as an imperative tool in communication at workplace	At workplaces special trainings on creative thinking must be conducted for success.	7. Can the mix of diversity in the executive department stimulate employee creativity? Please explain.
	Jorge Velilla Guardela	2018	Determinants of innovation at work: The moderating role of team diversity	The aim of this paper is to examine the antecedent work of innovation at the team level and the role of diversity in these relationships.	
	Rizuan bin Zainal	2018	Creative and Innovative Management Culture	Everything planned is needed to develop the culture of innovation and creativity in the organization.	

Table 3.1 (Continued): Related Literature Research Results and Variables

Variables in literature review	The author	Year	The title	The research conclusion	Interview questions
Organizational culture	Obiwulu, Solomon Uche; Yunus, Esa M.; Fahmi Ibrahim; Abu Samah Zuruzi	2019	Sustaining innovation: Creativity among employees of small and medium-sized enterprises and students in higher education institutions in Brunei Darussalam	Cross-functional team working within organizations is often portrayed as the key to creativity and success of organizations.	8. What factors do you think affect the formation of innovative thinking and the application of problem-solving skills?
Seminar (Training)	C. De Jager, A. Muller And G. Roodt	2013	Developing creative and innovative thinking and problem-solving skills in a financial services	Employees in a corporate context such as a financial services environment can develop appropriate creative and innovative thinking and problem-solving skills by means of an intervention such as a Creativity and Innovation Workshop.	

(Continued)

Table 3.1 (Continued): Related Literature Research Results and Variables

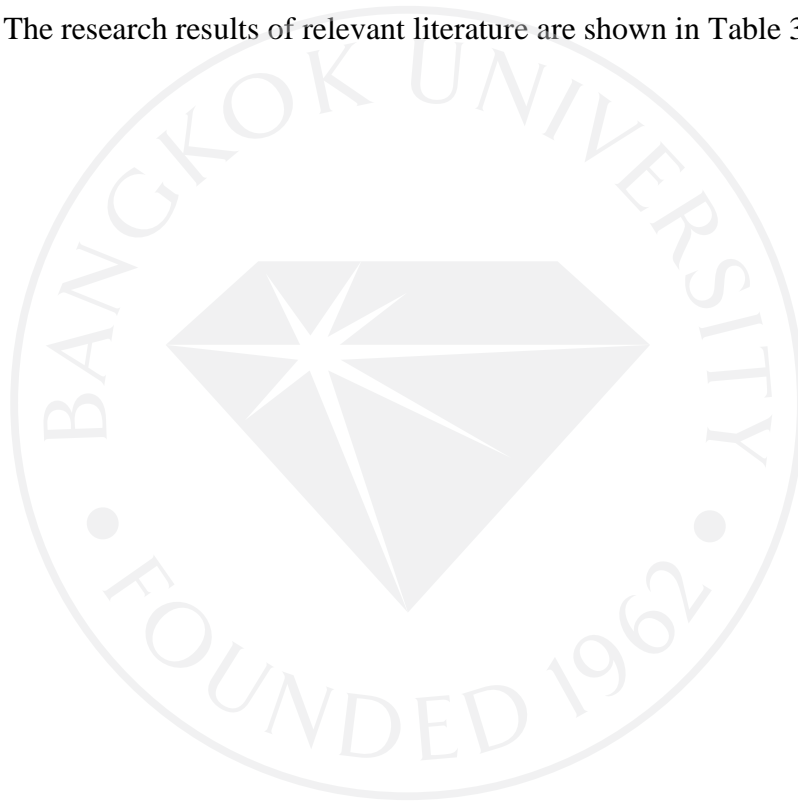| Variables in literature review	The author	Year	The title	The research conclusion	Interview questions
Seminar (Training)	Daniela Mieko Aragaki and Elvita Tomina	2018	Developing Innovative Thinking in an IT company	It is essential to keep trying to improve communication between teams. Reward systems may support innovation	9. Do you think innovation seminar (training) can cultivate employees' innovative thinking and problem-solving skills?
	Sandra Ohly	2018	Promoting Creativity at Work –Implications for Scientific Creativity	Organizations, including universities and other research institutions, need to build trusting relationships and foster a supportive atmosphere among their employees.	10. What do you think are the barriers to communication in your present department?

Table 3.1 (Continued): Related Literature Research Results and Variables

Variables in literature review	The author	Year	The title	The research conclusion	Interview questions
Seminar (Training)	Cherylene de Jager, Anton Muller, Gert Roodt	2013	Developing creative and innovative thinking and problem-solving skills in a financial services organisation	Develop creative and innovative thinking and problem-solving skills through an intervention such as a workshop.	11. Do you think that the establishment of trusting relationship between employees and the creation of a good organizational atmosphere will promote employee creativity?
Personal motivation	Olivier Serrat	2009	Harnessing Creativity and Innovation in the Workplace	Creative-thinking skills are one part of creativity but that expertise and motivation are also essential.	12. Do you think there are any ways to promote the improvement of personal creativity? 13. How do you think the inner enthusiasm of employees should be stimulated to increase creativity?

Table 3.1 (Continued): Related Literature Research Results and Variables

Variables in literature review	The author	Year	The title	The research conclusion	Interview questions
Personal motivation	Yanhan Zhu & Juan Wu	2014	A Study of Difficulties and Approaches for Innovative Talents Training of Public Administration Undergraduates	In order to educate the undergraduates of the public administration with innovative thinking, we must focus on the fluency, the flexibility, and the originality of independent thinking.	14. Do you think high creativity of employees can improve job performance? Please explain. 15. Do you think personal expertise affects innovation?
	Muhammad Azeem, Leonardo Jose Mataruna-Dos-Santos, Rabeb Ben Abdallah Moalla, Muhammad Musa Kaleem	2019	Confirmatory Model of the Workplace Creativity in Higher Education	There is a relationship between the creative abilities (originality, the ability to analyze and connect, risk acceptance, fluency, mental flexibility) and the level of the job performance of Jadara University employees.	16. Does the richer the professional knowledge, the stronger the innovation ability? Please explain.

(Continued)

Table 3.1 (Continued): Related Literature Research Results and Variables

Variables in literature review	The author	Year	The title	The research conclusion	Interview questions
Personal motivation	Fawzieh Masa'd, Nader Mohammad Aljawarneh	2020	Administrative creativity and job performance: An Empirical Study at Jadara University	There is a positive relationship between creative capabilities (originality, ability to analyze, acceptance of risk, fluency and mental flexibility), and job performance.	17. Do you think the use of educational management information systems, such as office automation software, can increase innovation? 18. Do you think there is anything that can be improved about the existing office automation system in the school?
Information technology	Eknarin Bangthamai, Anirut Satiman and Siwanit Autthawuttikul	2015	Development of a Knowledge Management System Supporting Creative Instruction to Enhance Creative Thinking of Higher Education Students	To develop a Knowledge Management System Supporting Creative Instruction to Enhance Creative Thinking of Higher Education Students	

(Continued)

Table 3.1 (Continued): Related Literature Research Results and Variables

Variables in literature review	The author	Year	The title	The research conclusion	Interview questions
Organizational guarantee	Siriphong Sauphayana	2021	Innovation in Higher Education Management and Leadership	A strong positive correlation between increase in innovation and better educational management and leadership. Additionally, the rate of adoption and use of technologies, such as education management information systems, improve the innovation in HEIs.	19. Do you think strong leadership in the executive branch increases innovation? 20. Do you think creating a personal growth mechanism can stimulate personal creativity? 21. How do you think the personal growth mechanism of schools should be improved?

Table 3.1 (Continued): Related Literature Research Results and Variables

Variables in literature review	The author	Year	The title	The research conclusion	Interview questions
Organizational guarantee	Ekaterina Batovrina	2016	Searching and Retaining Innovative Staff: Assessment of the Factors Promoting Employee Innovative Thinking within an Organisational Development Context	Managing innovative thinking at the organizational level, including building a culture of personal growth, is demanded.	

3.2.2 Qualitative Research Samples

According to the variables of the conceptual framework obtained in chapter 2, an open interview questionnaire was designed and a structured interview was conducted with 10 relevant respondents. See Appendix A for the interview questionnaire.

Qualitative analysis data were obtained through face-to-face interviews with 10 respondents. Among them, there are 6 employees who have worked in this school for more than 3 years, and 4 employees who have worked for less than 3 years. Among the 10 employees, 1 is deputy senior employee, 6 have intermediate professional title, and the remaining 3 are junior professional title employees. From the perspective of administrative work, of the above 10 people, 9 are from administrative management positions and 1 is from specialized teaching teachers. Therefore, they are very familiar with the work of office management staff and can provide real and effective data for this study.

3.2.3 Quantitative Study Samples

In order to facilitate the collection of sample data of the questionnaire, this questionnaire survey uses the online questionnaire function provided by the website of "Questionnaire Star" to make and publish an online questionnaire for respondents to visit, fill in and submit the online questionnaire. In order to develop the questionnaire, the author carried out analysis and research through literature research and qualitative analysis to determine the relevant variables. Then, four experts were invited to make evaluation. Finally, relevant variables were used to compile a questionnaire for the cost study.

The survey object is all the staff of Guangxi Vocational and Technical College. The samples were randomly selected from the staff of each tier 2 institution, including administrative staff and full-time teachers. Most of them are teachers who have worked at the school for many years, but a few are colleagues who have just started.Respondents' responses to the questionnaire were based on a 5-level Likert scale, and each question had 5 answer options, which were "strongly disagree", "disagree", "not necessarily", "agree" and "strongly agree". The five answer options were denoted as 1, 2, 3, 4 and 5 respectively. Algebra and were calculated according to the scores of each item of the interviewees to obtain the total score of individual

attitude. This total score indicates the strength of his attitude.

The questionnaire consists of two parts. The first part is to collect the demographic data of the interviewees in Guangxi Vocational and Technical College. The second part is to collect the data of the respondents' choice to train the innovative thinking of office management staff. The questionnaire is shown in Appendix B.

Using simple random sampling method, through the secretary of each unit sent questionnaires to the staff of the unit to participate in the survey. Data were collected through online survey from June 18, 2022 to June 27, 2022. A total of 209 valid questionnaires were collected, including 209 valid questionnaires and 0 invalid questionnaires.

3.3 Data Analysis Tool

In this study, scientific statistical software (SPSS) was used to analyze the data of the questionnaire, and the corresponding results and conclusions were obtained. The collected questionnaire data can be directly exported from the website of "Questionnaire Star", and then imported into SPSS for analysis. The author mainly used SPSS for frequency analysis, descriptive analysis, reliability and validity analysis, difference test, correlation analysis and regression analysis of questionnaire data.

3.4 Summary

Through relevant literature research and qualitative interviews, the independent variables affecting the formation of innovative thinking of office management staff in Guangxi Vocational and Technical College were determined to provide data support for the design of conceptual framework and questionnaire. Develop research procedures, determine research methods and tools, develop interview questionnaires and survey questionnaires, and evaluate their reliability and validity to ensure the scientificity and validity of the questionnaires. Finally, a questionnaire was issued to collect data, and SPSS was used to analyze the questionnaire data.

CHAPTER 4
DATA ANALYSIS

The results of the questionnaire are statistically analyzed, and the factors affecting the improvement of innovative thinking of office management staff are systematically analyzed.

4.1 Qualitative Data Analysis

After interviewing 10 people according to the interview questions, the researcher classified, coded and summarized the interview content, and determine the factors that affect the formation of innovative thinking of office management staff. See Appendix C for the narrative coding table of the interview.

In order to ensure the validity of qualitative research, the author found four experts in the field of innovation research to evaluate the interview questions, and evaluated them based on content validity (IOC). Invalid score was 0, effective score was 1. The scores of the four experts were summarized and the average score was calculated. Interview questions with a score of more than 75% were considered to be valid. The validity review table is shown in Appendix D.

4.2 Quantitative Data Analysis

4.2.1 Hypothesis

Through the analysis of a large number of literatures, we found the influencing factors of cultivating innovative thinking of office management staff. Based on the above research results, the author established a conceptual framework and used it as the research model of this study. The model fully demonstrates the influence mechanism of six dimensions, including work environment, organizational culture, seminar (training), personal motivation, information technology and organizational guarantee, on the cultivation of innovative thinking of office management staff, as well as the interaction mechanism and process of each dimension. Based on the above research, the author puts forward the research hypothesis. It is hypothesized that there is a significant positive relationship between work environment, organizational culture, seminar (training), personal motivation,

information technology, organizational guarantee and the cultivation of innovative thinking of office management staff.

4.2.2 Basic Information

This study conducted frequency statistics on the gender, age, education level, schooling time and job position of the respondents who participated in the questionnaire survey, and the percentage of each option in the total number of respondents. It can be seen from the table below that 50.72% of the samples are "male". And the proportion of female samples is 49.28%. The proportion of "over 41 years old" was 26.32%. In terms of academic qualifications, the highest proportion of "Master's" is 57.42%. 38.76% of the samples are undergraduates. In terms of school working hours, the highest proportion of "less than 3 years" is 31.58%. More than 50% of the samples in the job positions choose "administrative (education auxiliary department) management positions". In addition, the proportion of the full-time teacher post sample is 48.80%.

Table 4.1: Basic Information Frequency Analysis Results

Name	Options	Frequency	Percent (%)	Cumulative percentage (%)
Gender	Male	106	50.718	50.718
	Female	103	49.282	100.000
Age	21-25 years old	17	8.134	8.134
	26-30 years old	44	21.053	29.187
	31-35 years old	49	23.445	52.632
	36-40 years old	44	21.053	73.684
	over 41 years old	55	26.316	100.000
Education	College	4	1.914	1.914
	Undergraduate	81	38.756	40.670
	Master	120	57.416	98.086
	PhD	4	1.914	100.000

(Continued)

Table 4.1 (Continued): Basic Information Frequency Analysis Results

Name	Options	Frequency	Percent (%)	Cumulative percentage (%)
School Hours	3 years or less	66	31.579	31.579
	3-5 years	41	19.617	51.196
	5-10 years	43	20.574	71.770
	10+ years	59	28.230	100.000
Jobs	full-time teacher post	102	48.804	48.804
	Administration (Auxiliary Department) Management Post	107	51.196	100.000
	total	209	100.0	100.0

4.2.3 Descriptive Analysis

This paper makes descriptive statistics on the topics of work environment, organizational culture, seminar (training), personal motivation, information technology, and organizational guarantee scale, which mainly include information such as mean, standard deviation, skewness, and kurtosis, so as to judge the quantity the basic level of the items in the table and the distribution of the data presented.

Table 4.2: Descriptive Statistics

	number of cases	minimum	maximum value	average value	standard deviation	Skewness	Kurtosis
WE1	209	1.00	5.00	3.785	1.430	-0.820	-0.745
WE2	209	1.00	5.00	3.823	1.352	-0.898	-0.466
OC1	209	1.00	5.00	3.737	1.353	-0.818	-0.594
OC2	209	1.00	5.00	3.584	1.392	-0.629	-0.878
OC3	209	1.00	5.00	3.627	1.343	-0.677	-0.736

Table 4.2 (Continued): Descriptive Statistics

	number of cases	minimum	maximum value	average value	standard deviation	Skewness	Kurtosis
OC4	209	1.00	5.00	3.694	1.377	-0.717	-0.773
Sem1	209	1.00	5.00	3.742	1.294	-0.813	-0.451
Sem2	209	1.00	5.00	3.756	1.302	-0.858	-0.395
Sem3	209	1.00	5.00	3.708	1.277	-0.836	-0.358
PM1	209	1.00	5.00	3.857	1.358	-0.911	-0.481
PM2	209	1.00	5.00	3.794	1.320	-0.832	-0.493
PM3	209	1.00	5.00	3.742	1.305	-0.782	-0.524
IT1	209	1.00	5.00	3.455	1.434	-0.461	-1.124
IT2	209	1.00	5.00	3.546	1.457	-0.566	-1.078
OG1	209	1.00	5.00	3.718	1.331	-0.779	-0.588
OG2	209	1.00	5.00	3.890	1.342	-0.955	-0.374

It can be seen from the above table that the statistical analysis results of each item data contained in the questionnaire, including the number of cases, the minimum value, the maximum value, the mean, the standard deviation, the skewness and the kurtosis, are used to verify whether the data obtained by the survey obey the positive state distribution. Whether the data obeys the normal distribution will have a crucial impact on the subsequent analysis believes that when the absolute value of skewness is less than 3 and the absolute value of kurtosis is less than 10, it indicates that the sample basically obeys normality distributed. The formal sample results in the table show that the absolute value of skewness of each item is less than 3, and the absolute value of kurtosis is less than 10. Both skewness and kurtosis meet the conditions of normal distribution, indicating that each item can obey normal distribution. The data recovered from the questionnaire can be directly used for subsequent statistical analysis such as reliability and validity.

4.2.4 Reliability Analysis

Reliability Analysis is to ensure the validity of model fit evaluation and hypothesis testing. In this paper, Cronbach's Alpha reliability coefficient is used to

check the consistency of questionnaire research variables on each measurement item. Hair, Anderson, Tatham, & Black (1998) and Devellis (1991) believe that the Cronbach's Alpha coefficient must be greater than 0.7 to have good reliability.

Table 4.3: Reliability Analysis

	Cronbach's Alpha	Number of items
Work environment	0.830	2
Organizational Culture	0.890	4
Seminar (Training)	0.893	3
Personal motivation	0.874	3
Information Technology	0.859	2
Organizational Guarantee	0.821	2

From the table above, it can be concluded that the Cronbach's Alphas of work environment, organizational culture, seminar (training), personal motivation, information technology, and organizational guarantee in this study are 0.830, 0.890, 0.893, 0.874, 0.859, and 0.821, which are all greater than 0. 8, indicating that the variables of the questionnaire in the study have good reliability.

4.2.5 Validity Analysis

Validity analysis or measurement is a powerful tool that can be used to correctly measure the extent of the function that the research study intends to measure. In this study, factor analysis will be used to test the validity of the measurement. First pass the KMO sample adequacy measure and the Bartlett sphere test to see whether the data can be subjected to factor analysis. It is generally believed that if the KMO is above 0.90, the validity of the scale is very good; if the KMO is between 0.7-0.9, the validity is acceptable; if the KMO is between 0.5-0.7, the validity is average; if the KMO is below 0.5, indicating that the validity is unacceptable and some items of the scale need to be modified. In addition, when the statistical significance probability of the Bartlett sphericity test is less than or equal to the significance level, factor analysis can be performed.

Table 4.4: KMO of the questionnaire and Bartlett's test

KMO value		0.788
Bartlett's sphericity test	Approximately chi-squared	1856.368
	df	120
	p value	0.000

Using factor analysis to conduct information enrichment research, first analyze whether the research data is suitable for factor analysis. It can be seen from the above table that the KMO is 0.788, which is greater than 0.6, which meets the prerequisite requirements of factor analysis, which means that the data can be used for factor analysis research. And the data passed the Bartlett sphericity test ($p < 0.05$), indicating that the research data are suitable for factor analysis

Table 4.5: Total Variance Explained for Questionnaires

Element	initial eigenvalues			Extract the load sum of squares			Rotational load sum of squares		
	total	percent variance	Cumulative %	total	percent variance	Cumulative %	total	percent variance	Cumulative %
1	5.434	33.961	33.961	5.434	33.961	33.961	3.036	18.975	18.975
2	1.946	12.160	46.121	1.946	12.160	46.121	2.485	15.533	34.508
3	1.779	11.119	57.240	1.779	11.119	57.240	2.442	15.265	49.773
4	1.593	9.955	67.196	1.593	9.955	67.196	1.751	10.945	60.718
5	1.302	8.139	75.334	1.302	8.139	75.334	1.711	10.692	71.410
6	1.079	6.742	82.076	1.079	6.742	82.076	1.707	10.666	82.076
7	0.434	2.712	84.788						
8	0.389	2.429	87.217						
9	0.357	2.230	89.447						
10	0.316	1.975	91.423						
11	0.309	1.933	93.356						

(Continued)

Table 4.5 (Continued): Total Variance Explained for Questionnaires

Element	initial eigenvalues			Extract the load sum of squares			Rotational load sum of squares		
	total	percent variance	Cumulative %	total	percent variance	Cumulative %	total	percent variance	Cumulative %
12	0.248	1.549	94.904						
13	0.231	1.446	96.350						
14	0.218	1.365	97.715						
15	0.210	1.310	99.026						
16	0.156	0.974	100.000						
Extraction method: principal component analysis.									

The above table analyzes the extraction of factors and the amount of information extracted from factors. It can be seen from the above table that a total of 6 factors are extracted by factor analysis, and the eigenvalues are all greater than 1. The variance explanation rates of these 6 factors after rotation are 18.97. 5 %, 15.53 3 %, 15.265 %, 10.945 %, 10.692 %, 10.66 6 %, the cumulative variance explained rate after rotation is 82.076 %.

Figure 4.1: Lithograph
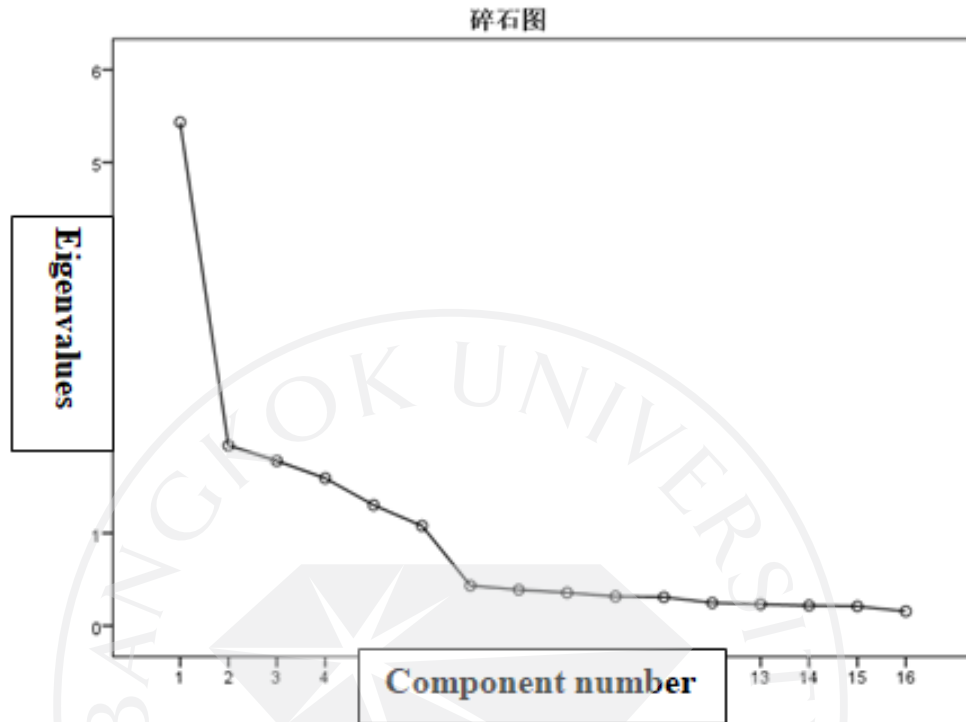
The above figure is the main factor gravel chart, from which you can visually check the number of factors to be extracted. It is actually drawn according to the data in the "Total" column under the "Initial Eigenvalue" column in the figure, and the eigenvalues are drawn Sort in descending order. In fact, it is a scatter plot of principal components arranged according to the size of the eigenvalues. It can be seen from the figure that the eigenvalues of the 7th factor in the figure change slowly, and the eigenvalues are less than 1, so the extraction of the first 6 principal factors is a comparison appropriate. It can be seen that the eigenvalues are very low starting from the 7th principal component. The figure shows from another side that only 6 principal components need to be extracted.

Table 4.6: Rotated Composition Matrix

dimension	item	Element					
		1	2	3	4	5	6
Organizational Culture	OC2	0.889	0.118	0.097	0.066	0.135	0.071
	OC4	0.852	0.134	0.063	0.099	0.029	0.050
	OC1	0.812	0.097	0.122	0.213	0.102	0.069
	OC3	0.786	0.100	0.274	0.018	0.097	0.085
Seminar (Training)	Sem2	0.138	0.895	0.126	0.024	0.088	0.114
	Sem3	0.177	0.871	0.092	0.105	0.132	0.060
	Sem1	0.083	0.871	0.102	0.097	0.076	0.070
Personal Motivation	PM1	0.140	0.067	0.864	0.110	0.052	0.088
	PM2	0.155	0.131	0.855	0.160	0.154	0.044
	PM3	0.165	0.129	0.851	0.138	0.021	0.053
Information Technology	IT2	0.114	0.117	0.187	0.898	0.005	0.082
	IT1	0.191	0.084	0.179	0.890	0.062	0.064
Organizational Guarantee	OG2	0.092	0.109	0.068	0.010	0.902	0.128
	OG1	0.189	0.155	0.122	0.057	0.863	0.152
Work Environment	WE2	0.130	0.101	0.037	0.059	0.069	0.916
	WE1	0.070	0.112	0.127	0.085	0.218	0.874

Study data were rotated using the maximum variance rotation method (varimax) to find the correspondence between factors and study terms. The above table shows the information extraction of factors for research items, as well as the corresponding relationship between factors and research items. It can be seen from the above table that after ensuring that factors can extract most of the information of the research items, then analyze the corresponding relationship between factors and research items (When the absolute value of the factor loading coefficient is greater than 0.5, it means that this item has a corresponding relationship with the factor). Items corresponding to 6 factors were obtained, indicating that the questionnaire contains 6 influencing factors, and the validity of the questionnaire is good.

4.2.6 Correlation Analysis

In the previous article, the structure of the dimension and the corresponding questions were determined through the validity analysis and reliability analysis, and the average score of the questions in each dimension was calculated as the score of this dimension, and then the correlation analysis was carried out. Correlation analysis mainly studies the correlation between variables. The value range of the correlation coefficient is between -1 and 1. The larger the absolute value, the closer the correlation between variables proposed a detailed classification method of correlation coefficient, $|r|=1$, complete correlation; $|r| \leq 0.70 < 0.99$, highly correlated; $0.40 \leq |r| < 0.69$, moderate correlation; $0.10 \leq |r| < 0.39$, low correlation; $|r| < 0.10$, weak or no correlation.
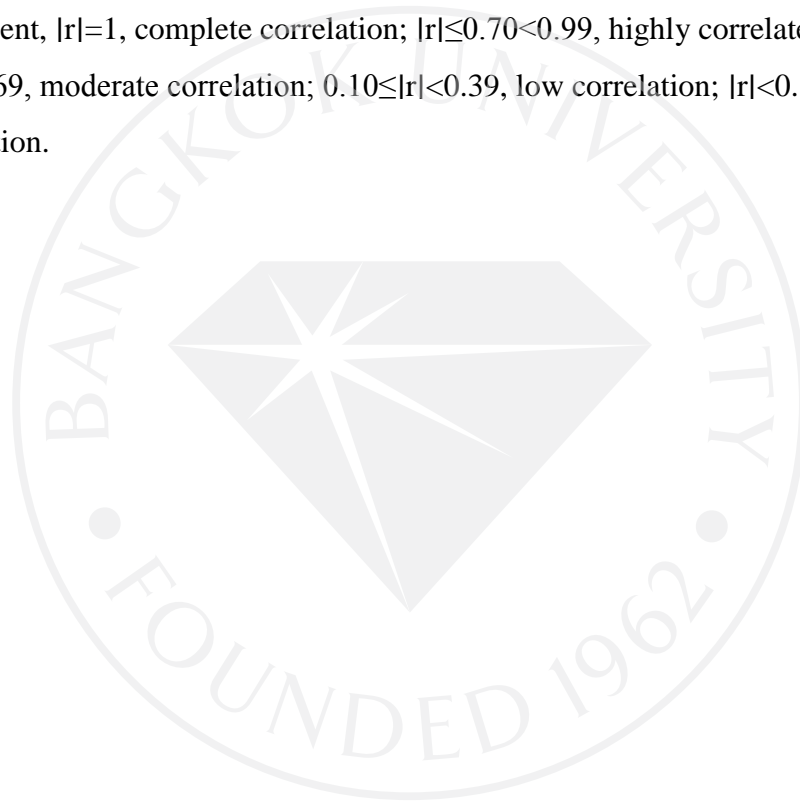
Table 4.7: Pearson Correlation

	Average value	Standard deviation	Work environment	Organizational culture	Seminar (Training)	Personal motivation	Information technology	Organizational guarantee	Innovative thinking
Work environment	3.804	1.287	1						
Organizational culture	3.660	1.185	0.235***	1					
Seminar (Training)	3.735	1.171	0.248***	0.313***	1				
Personal motivation	3.797	1.187	0.211**	0.364***	0.283***	1			
Information Technology	3.500	1.353	0.202**	0.320***	0.241***	0.380***	1		
Organizational guarantee	3.804	1.231	0.341***	0.297***	0.293***	0.240***	0.141*	1	
Innovative thinking	3.665	1.034	0.436***	0.449***	0.440***	0.458***	0.393***	0.520***	1

*$p < 0.05$** $p < 0.01$*** $p < 0.001$

Innovative thinking and work environment, organizational culture, seminar(training) , personal motivation, information technology, and organizational guarantee all showed significant correlations with values of 0.436, 0.449, 0.440, 0.458, 0.393, 0.520, and The correlation coefficient values are all greater than 0, which means that there is a positive correlation between innovative thinking and work environment, organizational culture, seminar (training), personal motivation, information technology, and organizational guarantee.

4.2.7 Difference analysis

4.2.7.1 Gender difference analysis

Table 4.8: T-test Analysis Results

	Sex (mean ± SD)		t	p
	Male (n =106)	Female (n =103)		
Work environment	3.462±1.373	4.155±1.091	-4.046	0.000***
Organizational culture	3.620±1.161	3.701±1.214	-0.494	0.622
Seminar (Training)	3.513±1.239	3.964±1.055	-2.841	0.005**
Personal motivation	3.811±1.183	3.783±1.196	0.171	0.864
Information technology	3.476±1.264	3.524±1.446	-0.255	0.799
Organizational guarantee	3.646±1.282	3.966±1.159	-1.890	0.060
Innovative thinking	3.868±0.874	3.456±1.144	2.917	0.004**

*$p < 0.05$ **$p < 0.01$ ***$p < 0.001$

It can be seen from the above table that different gender samples have no significant effect on organizational culture, personal motivation, information technology, and organizational guarantee (p> 0.05), which means that different gender samples have no significant impact on organizational culture, personal motivation, information technology, and organizational guarantee. The guarantees all show consistency, and there is no difference. In addition, gender samples showed significant differences in work environment, seminar (training), and innovative thinking (p < 0.05), which means that different gender samples have differences in work environment, seminar (training), and innovative thinking. Specifically the analysis shows that gender has a 0.01 level of significance for the work environment (t=-4.046, p=0.000), and the specific comparison difference shows that the average value of males (3.46) will be significantly lower than the average of females (4.16). Gender was significant at the 0.01 level for seminar (training) (t= -2.841, p = 0.005), and the specific contrast difference shows that the average of males (3.51) will be significantly lower than the average of females (3.96).

Gender has a 0.01 level of significance for innovative thinking (t = 2.917, p = 0.004), and the specific comparison shows that the average of males (3.87) is significantly higher than the average of females (3.46).

It can be concluded that: different gender samples do not show significant differences in organizational culture, personal motivation, information technology, and organizational guarantee. In addition, gender samples show significant differences in three items: work environment, seminar (training), and innovative thinking.

4.2.7.2 Analysis of age differences

Table 4.9: ANOVA Results

	Age (mean ± SD)					F	p
	21-25 years old (n =17)	26-30 years old (n =44)	31-35 years old (n =49)	36-40 years old (n =44)	Over 41 years old (n =55)		
Work environment	4.676±0.611	3.841±1.279	3.786±1.335	3.830±1.347	3.500±1.266	2.833	0.026*
Organizational culture	3.941±1.040	3.682±1.128	3.878±1.199	3.761±1.127	3.282±1.251	2.185	0.072
Seminar (Training)	4.314±0.968	3.553±1.196	3.830±1.074	3.864±1.119	3.515±1.281	2.041	0.090
Personal motivation	4.059±1.156	3.765±1.172	3.986±0.986	3.970±1.249	3.436±1.272	2.072	0.086
Information technology	4.294±0.830	3.307±1.369	3.653±1.247	3.807±1.348	3.027±1.406	4.350	0.002**
Organizational guarantee	4.529±0.695	3.773±1.250	3.776±1.208	3.852±1.354	3.591±1.214	1.955	0.103
Innovative thinking	4.059±0.899	3.591±1.207	3.714±0.866	3.727±1.188	3.509±0.920	1.054	0.381

* $p < 0.05$** $p < 0.01$*** $p < 0.001$

It can be seen from the above table that samples of different ages have no significant effect on organizational culture, seminar (training), personal motivation, organizational guarantee, and innovative thinking ($p > 0.05$), which means that samples of different ages have no significant effect on organizational culture, seminar Meeting (training), personal motivation, organizational guarantee, and innovative thinking all show consistency, and there is no difference. In addition, age samples showed significant differences in work environment and information technology ($p<0.05$), which means that different age samples have differences in work environment and information technology. The specific analysis shows that:

Age showed a 0.05 level of significance for the work environment ($F= 2.833$, $p= 0.026$), and the specific comparison difference shows that the comparison results of the average scores of the groups with more obvious differences are "21-25 years old> 26-30 years old; 21-25 years old > 31-35 years old; 21-25 years old > 36-40 years old; 21-25 years old > 41 years old".

Age showed a 0.01 level of significance for information technology ($F = 4.350$, $p = 0.002$), and the specific comparison difference shows that the comparison results of the average scores of the groups with more obvious differences are "21-25 years old> 26-30 years old; 21-25 years old > 41 years old; 31-35 years > 41 years old; 36-40 years old > 41 years old".

It can be concluded that: different age samples do not show significant differences in organizational culture, seminar (training), personal motivation, organizational guarantee, and innovative thinking. In addition, age samples show significant differences in work environment and information technology.

4.2.7.3 Analysis of Educational Differences

Table 4.10: ANOVA Results: Education

	Education (mean ± standard deviation)				F	p
	College (*n* =4)	Undergraduate (*n* =81)	Master (*n* =120)	PhD (*n* =4)		
Work environment	2.500±1.080	3.636±1.369	3.933±1.218	4.625±0.479	2.851	0.038*
Organizational culture	2.188±1.143	3.420±1.214	3.881±1.085	3.375±1.887	4.900	0.003**
Seminar (Training)	2.333±1.054	3.346±1.207	4.031±1.049	4.167±1.036	8.438	0.000***
Personal motivation	3.000±1.826	3.490±1.137	4.014±1.163	4.333±0.720	4.207	0.006**
Information technology	3.000±1.826	2.988±1.337	3.821±1.253	4.750±0.289	8.210	0.000***
Organizational guarantee	3.375±1.315	3.407±1.250	4.079±1.136	4.000±1.683	5.312	0.002**
Innovative thinking	2.250±0.957	3.444±0.962	3.842±1.029	4.250±0.957	5.674	0.001***

* $p < 0.05$** $p < 0.01$*** $p < 0.001$

It can be seen from the above table that samples with different educational backgrounds have significant effects on work environment, organizational culture, seminar(training) , personal motivation, information technology, organizational guarantee, and innovative thinking ($p < 0.05$), indicating that different educational backgrounds The samples differed in terms of work environment, organizational culture, seminar(training), personal motivation, information technology, organizational guarantee, and innovative thinking. The specific analysis shows that:

Educational background showed a 0.05 level of significance for the work environment (F= 2.851, p = 0.038), and the specific comparison difference shows that the comparison results of the average scores of the groups with more obvious differences are "Master> College; Doctor> College"

Educational degree shows a 0.01 level of significance for organizational culture (F=4.900, p=0.003), and the specific comparison difference shows that the comparison results of the average scores of the groups with more obvious differences are "undergraduate>college; master> college; master> Undergraduate". The degree of education shows a 0.01 level of significance for seminar (training) (F=8.438, p=0.000), and the specific comparison difference shows that the comparison results of the average scores of the groups with more obvious differences are "Master>College, Doctor>College, Master>Undergraduate".

Educational degree shows a 0.01 level of significance for personal motivation (F=4.207, p=0.006), and the specific comparison difference shows that the group average score comparison result with more obvious difference is "Master > Undergraduate".

Educational background shows a 0.01 level of significance for information technology (F=8.210, p= 0.000), and the specific comparison difference shows that the comparison results of the average scores of the groups with more obvious differences are "Master>Undergraduate; Doctor>Undergraduate".

Educational background shows a 0.01 level of significance for organizational guarantee (F= 5.312, p = 0.002), and the specific comparison difference shows that the comparison results of the average scores of the groups with more obvious differences are "Master > Undergraduate".

Educational degree shows a 0.01 level of significance for innovative thinking (F=5.674, p=0.001), and the specific comparison difference shows that the comparison results of the average scores of the groups with more obvious differences are "undergraduate> college; master> college; doctor> College; Master > Undergraduate".

In conclusion, it can be seen that there are significant differences in work environment, organizational culture, seminar(training), personal motivation, information technology, organizational guarantee, and innovative thinking among

samples with different educational backgrounds.

4.2.7.4 Analysis of Differences in School Working Hours

Table 4.11: ANOVA Results: Hours of school work

	Hours of school work (mean ± SD)					
	Less than 3 years (n = 66)	3-5 years (n =41)	5-10 years (n =43)	10+ years (n =59)	F	p
Work environment	3.682±1.380	4.037±1.098	3.826±1.414	3.763±1.212	0.666	0.574
Organizational culture	3.742±1.149	3.780±1.215	3.953±1.000	3.271±1.257	3.354	0.020*
Seminar (Training)	3.687±1.190	3.854±1.174	3.946±1.120	3.554±1.182	1.115	0.344
Personal motivation	3.889±1.037	3.943±1.174	3.907±1.155	3.514±1.347	1.593	0.192
Information technology	3.364±1.377	3.927±1.282	3.884±1.090	3.076±1.417	4.927	0.003**
Organizational guarantee	3.773±1.268	3.720±1.290	3.919±1.248	3.814±1.156	0.202	0.895
Innovative thinking	3.803±1.011	3.805±1.077	3.767±0.947	3.339±1.044	2.807	0.041*

* $p < 0.05$** $p < 0.01$*** $p < 0.001$

It can be seen from the above table that samples of working hours in different schools have no significant effect on work environment, seminar (training), personal motivation, and organizational guarantee (p>0.05), which means that samples of working hours in different schools have no significant effect on work environment, seminar (training), personal motivation, and organizational guarantee all showed consistency and no differences. In addition, the school working hours samples showed significant differences in organizational culture, information technology, and innovative thinking (p<0.05), which means that different school working hours

samples have differences in organizational culture, information technology, and innovative thinking. The specific analysis shows that the school working hours have a 0.05 level of significance for organizational culture (F= 3.354, p=0.020), and the specific comparison difference shows that the comparison results of the average scores of the groups with obvious differences are "under 3 years> More than 10 years; 3-5 years > 10 years; 5-10 years > 10 years".

The school working hours showed a 0.01 level of significance for information technology (F=4.927, p=0.003), and the specific comparison difference shows that the comparison results of the average scores of the groups with more obvious differences are "3-5 years>3 years or less; 5-10 years>3 years or less; 3-5 years>10 years or more; 5-10 years>10 years or more".

The school working hours showed a 0.05 level of significance for innovative thinking (F=2.807, p=0.041), and the specific comparison difference shows that the comparison results of the average scores of the groups with more obvious differences are "less than 3 years>more than 10 years; 3-5 years>10 years or more; 5-10 years>10 years or more".

It can be concluded that: different school working hours samples have no significant differences in work environment, seminar (training), personal motivation, and organizational guarantee. In addition, school working hours samples have significant differences in organizational culture, information technology, and innovative thinking.

4.2.7.5 Analysis of Job Differences

Table 4.12: T-test Analysis Results of Job Differences

	Jobs (mean ± SD)		t	p
	Full-time teaching posts ($n = 102$)	Administration (Auxiliary Department) Management Post ($n = 107$)		
Work environment	3.775±1.289	3.832±1.290	-0.321	0.749
Organizational culture	3.775±1.119	3.551±1.240	1.363	0.174
Seminar (Training)	3.905±1.151	3.573±1.173	2.064	0.040*
Personal motivation	3.922±1.115	3.679±1.245	1.481	0.140
Information technology	3.539±1.342	3.463±1.370	0.408	0.684
Organizational guarantee	3.912±1.205	3.701±1.251	1.240	0.216
Innovative thinking	3.765±1.073	3.570±0.992	1.362	0.175

* $p < 0.05$** $p < 0.01$*** $p < 0.001$

It can be seen from the above table that different job samples have no significant effect on work environment, organizational culture, personal motivation, information technology, organizational guarantee, and innovative thinking (p>0.05), which means that different job samples have no significant impact on work environment, organizational culture, personal motivation, information technology, organizational guarantee, and innovative thinking all show consistency and no difference. In addition, the job samples showed a significant (p<0.05) for the seminar

(training), which means that different job samples have differences in the seminar (training). 0.05 level of significance (t=2.064, p=0.040), and the specific comparison difference shows that the average value of full-time teaching posts (3.91) will be significantly higher than the average value of administrative (teaching auxiliary departments) management posts (3.57).

In conclusion, it can be seen that different job samples do not show significant differences in work environment, organizational culture, personal motivation, information technology, organizational guarantee, and innovative thinking. In addition, job samples show significant differences in seminar (training).

4.2.8 Regression Analysis

Correlation analysis can only simply describe the effect between two variables, and cannot exclude the interaction between influencing factors, so we need to further use multiple linear regression analysis. Multiple linear regression can exclude the interaction between independent variables and obtain the relationship between independent variables and dependent variables. This study takes work environment, organizational culture, seminar (training), personal motivation, information technology, and organizational guarantee as independent variables, innovative thinking as a dependent variable for regression analysis.

Table 4.13: Linear regression analysis results ($n = 209$)

	Unstandardized coefficients		Standardized coefficient	t	p	VIF	R^2	adjust R^2	F
	B	Standard Error	$Beta$						
Constant	0.083	0.248	-	0.335	0.738	-	0.523	0.509	36.889***
Work environment	0.151	0.043	0.188	3.534	0.001***	1.196			
Organizational culture	0.127	0.049	0.146	2.618	0.010**	1.314			
Seminar (Training)	0.150	0.048	0.170	3.166	0.002**	1.226			
Personal motivation	0.163	0.049	0.187	3.351	0.001***	1.315			
Information technology	0.118	0.041	0.155	2.851	0.005**	1.248			
Organizational guarantee	0.249	0.046	0.296	5.453	0.000***	1.249			
Dependent variable: innovative thinking									
DW value: 2.343									
*$p < 0.05$ **$p < 0.01$ ***$p < 0.001$									

It can be seen from the above table that the linear regression analysis is carried out with the work environment, organizational culture, seminar (training), personal motivation, information technology, and organizational guarantee as independent variables, and innovative thinking as the dependent variable. An R-squared value of 0.523 means that work environment, organizational culture, seminar (training), personal motivation, information technology, and organizational guarantee can explain 52.3% of the changes in innovative thinking. The F -test of the model found that the model passed the F -test (F=36.889, p< 0.05), which means that at least one of the work environment, organizational culture, seminar (training), personal motivation, information technology, and organizational guarantee will be affected. Innovative thinking has an impact relationship. In addition, the multicollinearity test of the model found that the VIF values in the model were all less than 5, which means that there is no collinearity problem; and the D-W value is near the number 2, which means that the model does not exist Correlation, there is no correlation between sample data, and the model is better. The final specific analysis shows that:

The regression coefficient value of the work environment is 0.188 (t=3.534, p=0.001<0.01), which means that the work environment will have a significant positive impact on innovative thinking.

The regression coefficient value of organizational culture is 0.146 (t=2.618, p=0.010<0.01), which means that organizational culture has a significant positive impact on innovative thinking.

The regression coefficient value of workshop (training) is 0.1 7 0 (t=3.166, p=0.002<0.01), which means that workshop (training) has a significant positive impact on innovative thinking.

The regression coefficient value of personal motivation is 0.187 (t=3.351, p=0.001<0.01), which means that personal motivation has a significant positive impact on innovative thinking.

The regression coefficient value of information technology is 0.155 (t =2.851, p =0.005<0.01), which means that information technology has a significant positive impact on innovative thinking.

The regression coefficient value of organizational guarantee is 0.296 (t=5.453, p=0.000<0.01), which means that organizational guarantee has a significant positive

impact on innovative thinking.

The summary analysis shows that: work environment, organizational culture, seminar (training), personal motivation, information technology, and organizational guarantee all have a significant positive impact on innovative thinking.

CHAPTER 5
CONCLUSION & DISCUSSION

This chapter mainly summarizes and discusses the research, as well as the research limitations and suggestions for future research.

5.1 Research Findings

This study found that Guangxi Vocational and Technical College pays more attention to innovation, pays attention to campus landscaping, beautiful environment, in terms of campus culture, condensed form its own unique culture, innovation atmosphere is relatively strong. If more attention is paid to the cultivation of innovative thinking of office management staff, the comprehensive quality of office management staff in administrative departments will be strengthened and more value will be created for the college. From the qualitative research results, this paper obtains 16 qualitative research results of innovative thinking training of office management staff.

1) Respondents all believe that the work environment has an important impact on the formation of innovative thinking. Provide a good work environment for employees from multiple angles.

2) Respondents generally believe that the organizational culture of Guangxi Vocational and Technical College has advantages, such as school motto, school spirit and school philosophy, which can fully stimulate employees' innovation.

3) In general, complex work encourages more creative behavior.

4) Respondents generally believe that Guangxi Vocational and Technical College attaches great importance to innovation and has made new breakthroughs in some aspects.

5) The combination of the diversity of administrative staff (age, personality and specialty) can stimulate employees' creativity.

6) Factors affecting the formation of innovative thinking and the application of problem-solving skills mainly include personal (personality, rank, working methods, work experience), department leadership style and school (environment, culture) and so on.

7) Training can really cultivate employees' innovative thinking and improve their problem-solving ability. It is suggested that schools hold more innovative theme training and strive to train all staff within a certain period of time.

8) Respondents generally believe that their work units have smooth communication. But communication between individual departments and other departments and schools is not smooth enough. The main reason is that there are few cross-department communication channels and communication mechanism has not been formed.

9) Building a trusting relationship among employees and creating a good organizational atmosphere can indeed promote employees' creativity.

10) Strengthen the self-study of employees. The school provides training opportunities, builds more communication and learning platforms between faculty and staff on campus and off campus, and establishes innovative reward mechanisms to promote the innovative thinking and ability of employees.

11) By improving the relevant incentive system and creating a good environment, the school can stimulate the internal enthusiasm of employees and increase their creativity.

12) Highly creative employees do boost job performance.

13) The solid professional knowledge of employees will promote innovation, but it depends on employees' good thinking and positive working attitude.

14) Respondents all think that the OA office system of the school is relatively easy to use, but some work processes need to be optimized.

15) School and department leaders should constantly improve their management ability, give full play to the core role of leadership, cultivate a good working atmosphere in the department, lead the staff to complete the work more quickly and efficiently, and listen to the opinions of staff and carry forward the democratic style.

16) The school needs to further improve the personal growth mechanism, which can be considered from the aspects of scientific research, teaching, professional title, ability improvement and career planning based on the actual situation of different positions.

Based on the above qualitative research results a questionnaire survey was designed, 209 questionnaires were collected, and SPSS software was used for analysis. Finally, the results of 16 quantitative studies on innovative thinking training of office management staff are obtained.

1) Work environment and personalized office environment will affect the formation of innovative thinking of employees.

2) The school culture will affect the innovative thinking of employees.

3) Complex work promotes innovative thinking.

4) The emphasis on innovation will improve the innovative thinking of employees.

5) The diversity of administrative staff will stimulate employees' innovative thinking.

6) Innovation seminar (training) will affect the formation of innovative thinking of employees, very few disagree.

7) Good communication will affect the formation of innovative thinking of employees.

8) The establishment of trust between employees will promote employees' innovative thinking.

9) Stimulating employees' inner enthusiasm can increase their innovative thinking.

10) Innovative thinking of employees can improve work efficiency.

11) The personal expertise of employees will promote their innovative thinking.

12) The use of educational management information systems, such as office automation software, can promote employees' innovative thinking.

13) The optimization of work process helps to improve the innovative thinking of employees.

14) Strong leadership in administrative departments can promote employees' innovative thinking.

15) Creating and improving personal growth mechanism can stimulate individual innovative thinking.

16) Respondents are generally satisfied with the school's innovation efforts.

5.2 Conclusion and Interpretation of Findings

Through the analysis, a total of six significant variables as independent variables affecting office management innovation thinking, to use these six research results can effectively help develop Guangxi vocational and Technical college office management innovation thinking, improve staff innovation quality, and improve work efficiency, promoting the development of Guangxi vocational and Technical college with high quality. The authors compared the results of these six studies with previous studies by other researchers and found that:

5.2.1 Work Environment

The work environment has a significant positive influence on innovative thinking. This finding and a previous study, The Role of Creativity in organizational Value Creation: Creative Competencies in Different Organizational Contexts (Markeviciute & Jucevicius, 2013) A creative work environment is an important factor in an organization.

5.2.2 Organizational Culture

Organizational culture has a significant positive influence on innovative thinking. And Creative and Innovative Management Culture (Zainal, 2018) the same points mentioned, everything planned is needed to develop the culture of innovation and creativity in the organization.

5.2.3 Seminar (training)

Seminar (training) has a significant positive impact on innovative thinking. This finding is consistent with the Role of Creative Thinking as an Imperative Tool in Communication at workplace (Tripathy, 2018), As a Member of the TEAM, Creative thinking on creative thinking must be held for success.

5.2.4 Personal Motivation

Personal motivation has a significant positive influence on innovative thinking. This and Harnessing Creativity and Innovation in the Workplace (Serrat, 2009) Creative-thinking skills are one part of creativity but that expertise and motivation are also essential.

5.2.5 Information Technology

Information technology will have a significant positive impact on innovative thinking. This finding is consistent with previous studies, development of a knowledge management system supporting creative instruction to enhance creative thinking of higher education education students (Satiman & Autthawuttikul, 2015) to develop a knowledge management system supporting creative instruction to enhance creative thinking of higher education education students.

5.2.6 Organizational Guarantee

Organizational guarantee has a significant positive impact on innovative thinking. Organizational guarantee is mainly from two aspects: department leadership and school system and mechanism. This finding is consistent with previous studies, Innovation in Higher Education Management and Leadership (Sauphayana, 2021). A strong positive correlation between increase in innovation and better educational management and leadership. Additionally, the rate of adoption and use of technologies, such as education management information systems, improve the innovation in HEIs. And Searching and Retaining Innovative Staff: Assessment of the Factors Promoting Employee Innovative Thinking within an organisational development context (Batovrina, 2016) mentioned the need to manage innovative thinking at the organizational level, including establishing a culture of personal growth. Personal growth culture should include the system and mechanism of personal growth.

5.3 Research Implication

Based on 6 key research results, this paper puts forward 6 research inspirations, which can effectively help Guangxi Vocational and technical College to cultivate the innovative thinking of office management staff, improve the innovative quality of staff, and improve work efficiency, and promote the high-quality development of Guangxi Vocational and technical College.

1) Guangxi Vocational and Technical College shall continue to pay attention to the construction of campus environment and the work environment of employees, provide safe and beautiful campus environment for employees, and encourage employees to make personalized arrangement of their office environment.

2) create distinctive creative organization culture can condensed staff awareness, promote employees to think progress, create value for organizations, therefore, to enhance the promotion of school culture, such as the school's history, inner spirit and learning characteristic culture brand propaganda, let the culture is deeply rooted in the hearts of the people, to enhance the staff's sense of identity.

3) Guangxi Vocational and Technical College must carry out training or seminar on innovation theme consciously in a planned way, especially strengthen innovation training for office staff of administrative departments. Because the office management work has a strong comprehensive, through the training of innovative thinking, improve the management ability of employees, can not only promote the process of the office management work, but also effectively promote the reform and innovation of office management, so that the management level of the office is more scientific and systematic.

4) The staff of Guangxi Vocational and Technical College should pay attention to the accumulation of personal professional knowledge and constantly improve their professional and technical skills, which will help cultivate their innovative thinking. , schools in terms of personal professional knowledge skills upgrading through certain incentives, guide staff positive progress, such as pay attention to general management work of the staff performance, give full play to the role of the performance "baton", at the same time concerned about the staff's work and study, etc., can be further stimulate internal innovation motivation and enthusiasm.

5) Guangxi Vocational and Technical College must continue to strengthen information construction, especially pay attention to the optimization of office automation system. On the one hand, it should provide employees with necessary office equipment, such as computers, printers, etc. On the other hand, it should improve the equipment maintenance service capacity, and provide employees with faster and more efficient services. In addition, strengthen contact with information technology service companies to provide the latest technical support, because the use of information technology will maximize the efficiency of employees, save time, so that employees have more time to think and carry out innovative work.

6) Guangxi Vocational and Technical College should pay attention to the leadership training of department leaders, because only a strong leader can lead the staff to continue to develop. At the same time, it is necessary to perfect the existing management system, especially to create and perfect the personal growth system and mechanism conducive to personal development. For example, on the basis of improving school-running systems and processes, and providing institutional guarantee for standardizing school-running, the personal growth system of employees should be further sorted out. Growth paths of different types of employees should be considered, and the development direction of employees should be pointed out in combination with the actual conditions of different employees. When forming a standard system, we should strengthen publicity, provide accurate answers and services for the growth of employees, and guide employees to learn and understand which is more conducive to the formation of innovative thinking of employees.

5.4 Research Limitations

5.4.1 There are many factors that affect the cultivation of innovative thinking of office management staff. Although the author has screened the influencing factors through literature search, theoretical analysis and in-depth interviews, some other influencing factors will inevitably be missed.

5.4.2 The research results of this paper are limited to Guangxi Vocational and Technical College, and there are certain limitations in the promotion of the research results by other universities.

5.4.3 This study focuses on discussing the influencing factors of innovative thinking training of office management staff and studying how to cultivate employees' innovative thinking, but the research on evaluation criteria of innovative thinking is not sufficient.

5.5 Recommendations for Further Research

5.5.1 There are many other theories and ways to explore the cultivation of innovative thinking of office management staff, which is not limited to the cultivation of innovative thinking. In future studies, it can also be discussed from different perspectives such as the impact of innovative thinking on work behavior.

5.5.2 In order to promote the research results quickly, the research scope can be expanded, for example, the cross-institution research on the cultivation of innovative thinking of employees. Once the research results are obtained, the research results can be immediately shared between different institutions.

5.5.3 The evaluation standard of innovative thinking needs to be further discussed, and the influence degree of innovative thinking on behavior is also the direction of further research.

Today's society is developing rapidly. The key to the development of colleges and universities is people, especially those with innovative thinking, who are playing an increasingly prominent role in the development of organizations. Therefore, the research content of this paper has enlightenment significance for Guangxi Vocational and Technical College to cultivate the innovative thinking of office management staff, and other similar colleges should also have certain reference significance.
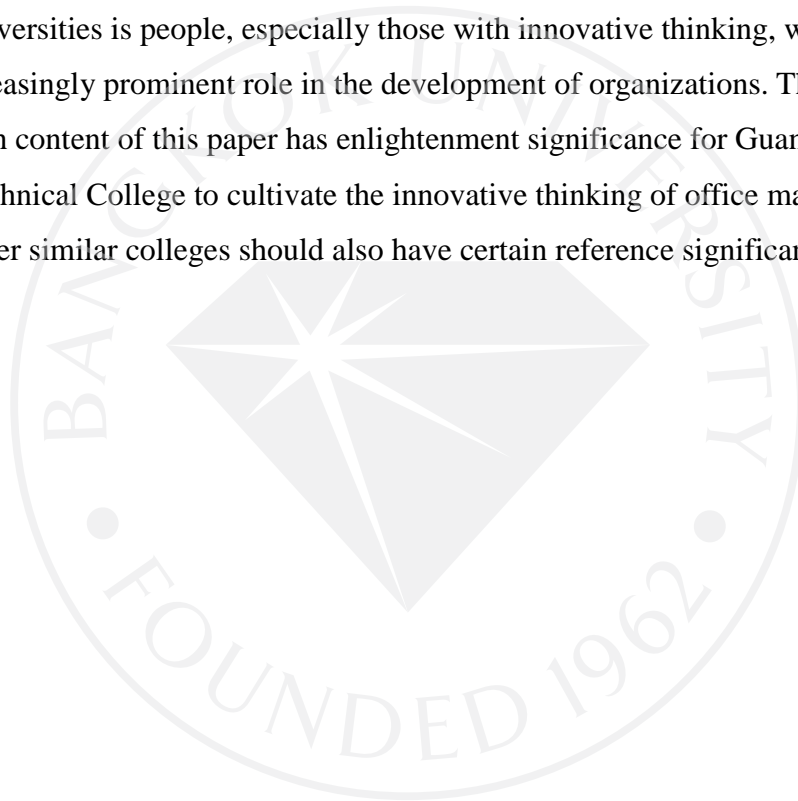
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APPENDICES
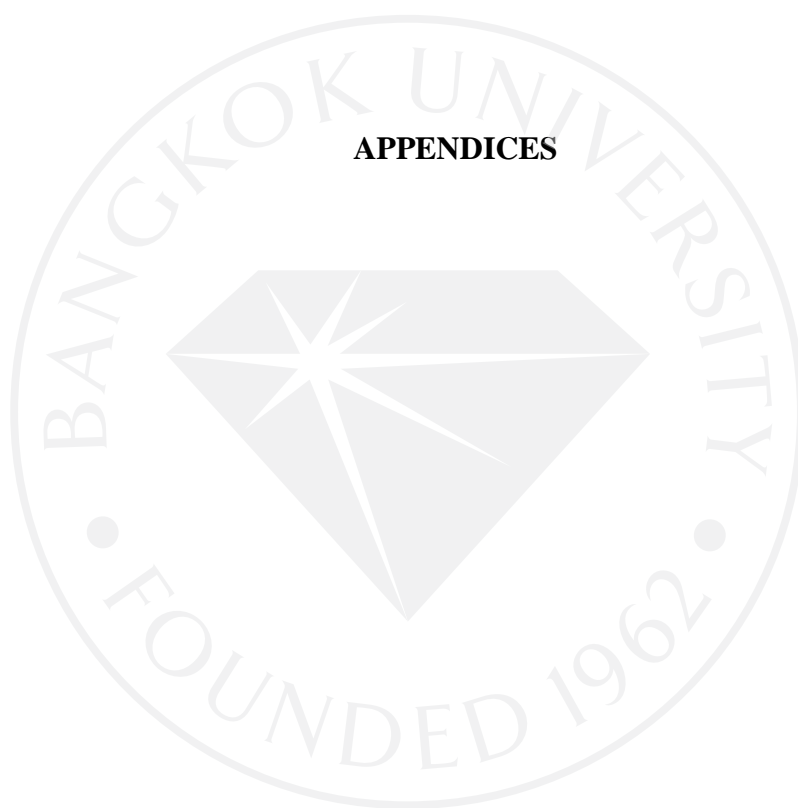
Appendix A

Interview Questionnaire

How to Foster Innovative Thinking for Office Administration Staff: A Case of Guangxi Vocational & Technical College

Dear Colleagues:

This interview is for research purposes only, and the information you provide will not be made public. Thanks for your support!

Your gender: □ male □ female   Your age:………………………………………

How long have you been working in this college:…………………………………………..

Your education background and professional title:………………………………………

Variables in a literature review	Questions	Answer	Note
Seminar (Training)	8. What factors do you think affect the formation of innovative thinking and the application of problem-solving skills?		
	9. Do you think innovation seminar (training) can cultivate employees' innovative thinking and problem-solving skills?		
	10. What do you think are the barriers to communication in your present department?		

Variables in a literature review	Questions	Answer	Note
Seminar (Training)	11. Do you think that the establishment of trusting relationship between employees and the creation of a good organizational atmosphere will promote employee creativity?		
Personal motivation	12. Do you think there are any ways to promote the improvement of personal creativity?		
	13. How do you think the inner enthusiasm of employees should be stimulated to increase creativity?		
	14. Do you think high creativity of employees can improve job performance? Please explain.		
	15. Do you think personal expertise affects innovation?		
	16. Does the richer the professional knowledge, the stronger the innovation		
Information technology	17. Do you think the use of educational management information systems, such as office automation		
	18. Do you think there is anything that can be improved about the existing office automation system in the school?		

Variables in a literature review	Questions	Answer	Note
Organizational guarantee	19. Do you think strong leadership in the executive branch increases innovation?		
	20. Do you think creating a personal growth mechanism can stimulate personal creativity?		
	21. How do you think the personal growth mechanism of schools should be improved?		
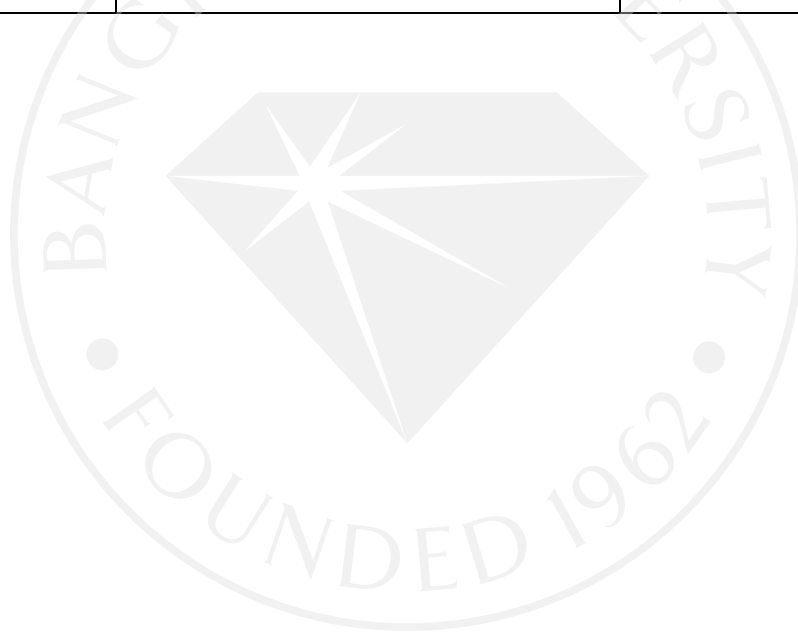
Appendix B

Questionnaire Survey

This questionnaire is part of an exploratory analysis of independent research on how to foster innovative thinking for office administration staff.2022 BY Maojing Zhu.

Dear colleagues:

  Thank you very much for taking the time to fill out this questionnaire. The purpose of this questionnaire is to explore how to cultivate the innovative thinking of office administration staff and obtain corresponding research data. This questionnaire is completely anonymous and does not involve personal privacy. It is only used for academic research. I hope to get your support and help.

  Please read the research questions and answer them objectively and truthfully. Thank you very much for your participation! Notes on options:

1 = Strongly disagree 2 = Disagree 3 = Not necessarily. 4 = Agree 5 = Strongly agree.

1. Your gender

  ○ Male   ○ female

2. Your age

  ○ 21-25 years old ○ 26-30 years old

  ○ 31-35 years old ○ 36-40 years old

  ○ over 41 years old

3. Your academic qualifications

  ○ College   ○ Undergraduate

  ○ Master   ○ Ph.D.

4. How long have you been working in Guangxi Vocational and Technical College?

    ○ 3 years or less   ○ 3-5 years

    ○ 5-10 years   ○ 10+ years

5. What is your current job position?

    ○ Full-Time Teacher Post

    ○ Administration (Auxiliary Department) Management Post

Questions	Strongly disagree →Strongly agree				
6. Do you think the work environment will affect the formation of employees' innovative thinking?	1	2	3	4	5
7. Do you think a personalized office environment can promote employees' innovative thinking?	1	2	3	4	5
8. Do you think the culture of the school will affect the innovative thinking of employees?	1	2	3	4	5
9. Do you think complex work affects employees' innovative thinking?	1	2	3	4	5
10. Do you think that the school's emphasis on innovation will improve employees' innovative thinking?	1	2	3	4	5
11. Do you think that the diversity of administrative staff will stimulate innovative thinking?	1	2	3	4	5
12. Do you think innovation seminar (training) will affect the formation of employees' innovative thinking?	1	2	3	4	5
13. Do you think good communication will affect the formation of employees' innovative thinking?	1	2	3	4	5
14. Do you think the establishment of trusting relationships among employees will promote innovative thinking among employees?	1	2	3	4	5

Questions	Strongly disagree →Strongly agree				
15. Do you think that stimulating employees' inner enthusiasm can increase employees' innovative thinking?	1	2	3	4	5
16. Do you think employees' innovative thinking can improve work performance?	1	2	3	4	5
17. Do you think that the professional skills possessed by individuals will promote the innovative thinking of employees?	1	2	3	4	5
18. Do you think the use of educational management information systems, such as office automation software, can promote employees' innovative thinking?	1	2	3	4	5
19. Do you think the optimization of the work process can help improve the innovative thinking of employees?	1	2	3	4	5
20. Do you think the strong leadership of the executive department can promote the innovative thinking of employees?	1	2	3	4	5
21. Do you think the creation and improvement of personal growth mechanism can stimulate personal innovative thinking?	1	2	3	4	5
22. Are you satisfied with the school's innovation work?	1	2	3	4	5

Appendix C

Finding and Analysis of Interviews

	Age	Sex	Occupations	Graduate
Respondent 1	39 years old	Male	Teaching Assistant	Graduate Student
Respondent 2	37 years old	Female	Engineer	Graduate Student
Respondent 3	31 years old	Male	Lecturer	
Respondent 4	32 years old	Female	Lecturer	Graduate Student
Respondent 5	36 years old	Male	No Title	Under Graduate
Respondent 6	42 years old	Female	Lecturer	Graduate Student
Respondent 7	48 years old	Male	Senior Economist	Graduate Student
Respondent 8	39 years old	Male	Lecturer	Graduate Student
Respondent 9	32 years old	Female	Intermediate	Graduate Student
Respondent 10	37 years old	Female	Assistant Engineer	Undergraduate

Respondent 1	Respondent 2	Respondent 3	Respondent 4	Respondent 5	Respondent 6	Respondent 7
0. How long have you been working in Guangxi Vocational and Technical College?						
1.0.1 6 years	2.0.1 4 years	3.0.1 6 years	4.0.1 9 months	5.0.1 8 months	6.0.1 13 years	7.0.1 12 years

Respondent 8	Respondent 9	Respondent 10	Coding round 1	Coding cycle 2	Categorizing (Keyword)	Evaluation
0. How long have you been working in Guangxi Vocational and Technical College?						
8.0.1 2 years	9.0.1 5 years	10.0.1 8 months	Working years		Working years	10 people in this interview, most of them are old employees, and there are a few new employees, including deputy senior employees and employees with junior titles. The selection of interviewees is reasonable.

Respondent 1	Respondent 2	Respondent 3	Respondent 4	Respondent 5	Respondent 6	Respondent 7
1. Do you think the work environment has a great influence on the formation of innovative thinking? 2. What kind of environment do you think organizations should provide to foster individual creativity?						
1.1.1 has a certain influence. 1.2.1 The organization should provide a work environment with a good working atmosphere. It is suggested that in addition to business guidance,	2.1.1 has a big impact. 2.2.1 Organizations should provide a relaxed and comfortable work environment in order to promote individual creativity.	3.1.1 has a big impact. The organization should create an atmosphere of positive thinking about work, such as requiring employees to set aside half an hour to an hour every day to reflect on and review	4.1.1 has a certain influence. 4.2.1 The organization should create a work environment with an innovative atmosphere, which is helpful to understand the cutting-edge	5.1.1 has a greater impact. 5.2.1 The organization should provide the following environment: (1) a beautiful campus environment; (2) a personalized office environment.	6.1.1 has a certain influence. 6.2.1 The organization should provide an environment with an incentive mechanism and a platform for creativity. At present, the incentive	7.1.1 has a big impact. 7.2.1 On the one hand, the organization should provide opportunities for communication with external units to promote more exchanges between employees and

Respondent 1	Respondent 2	Respondent 3	Respondent 4	Respondent 5	Respondent 6	Respondent 7
1. Do you think the work environment has a great influence on the formation of innovative thinking?						
2. What kind of environment do you think organizations should provide to foster individual creativity?						
department leaders should strengthen team building, because the team in the office has good cohesion and a harmonious atmosphere, which will naturally stimulate people's creativity.		the work of the day, sum up experience and improve personal creativity. The suggestion is to make this kind of summary and improvement at the school level. Leaders of various departments continue to convey and	innovation results, which can enhance our enthusiasm for innovation and stimulate our innovative thinking.		mechanism of the school is not perfect enough. There is a platform established, but the role is not obvious enough. It is recommended to give the same development platform to different jobs.	staff in similar positions in external units, so that employees can find their own shortcomings; the second is to have corresponding incentive measures to support innovation;

Respondent 1	Respondent 2	Respondent 3	Respondent 4	Respondent 5	Respondent 6	Respondent 7
1. Do you think the work environment has a great influence on the formation of innovative thinking?						
2. What kind of environment do you think organizations should provide to foster individual creativity?						
		instill such a concept to the staff. Over time, the creativity of individuals should be improved.				the third is to be at the administrative level, professional titles, etc. provide room for advancement for each employee.

Respondent 8	Respondent 9	Respondent 10	Coding round 1	Coding cycle 2	Categorizing (Keyword)	Evaluation
1. Do you think the work environment has a great influence on the formation of innovative thinking? 2. What kind of environment do you think organizations should provide to foster individual creativity?						
8.1.1 has a certain impact. 8.2.2 The organization should provide a standardized work environment, such as giving employees a certain amount of time and space to think and improve their creativity.	9.1.1 has a certain influence. 9.2.1 Provide a comfortable work environment and regular training mechanism.	1 0.1.1 has some influence. 10 .2 .1 A relaxed environment should be provided to create a positive and competitive environment.	7 people believe that the work environment has a certain influence on the formation of innovative thinking.	3 people think that the impact is great.	work environment	Everyone agrees that the work environment has an important influence on the formation of innovative thinking.

Respondent 8	Respondent 9	Respondent 10	Coding round 1	Coding cycle 2	Categorizing (Keyword)	Evaluation
1. Do you think the work environment has a great influence on the formation of innovative thinking? 2. What kind of environment do you think organizations should provide to foster individual creativity?						
Individual departments have too much workload and little personal time.						To provide employees with a good work environment from multiple perspectives.

Respondent 1	Respondent 2	Respondent 3	Respondent 4	Respondent 5	Respondent 6	Respondent 7
3. Does organizational culture affect employees' ability to innovate? What organizational culture elements do you think influence employees' ability to innovate? 4. How do you think organizational culture affects employees' ability to innovate?						
1.3.1 Yes. For example, the school motto and school spirit have a subtle effect on employees, which will motivate employees to make continuous efforts and contributions to the development of the school.	2.3.1 Yes. Some spirits can promote the innovation ability of employees. For example, the school advocates the concept of establishing a "healthy, green, and clean" school, which can especially guide everyone to resonate.	3.3.1 has a certain influence. The individual's rigorous and pragmatic and active pursuit of perfection style, the unity and harmony of employees within the department and the atmosphere of frequent discussions and	4.3.1 Yes. Such as the organization's system. 4.4.1 If an organization's system is not perfect, there will be many loopholes, which is not conducive to work norms and innovation.	5.3.1 Yes. The level of importance that leaders attach to innovation, the organization's incentive mechanism for innovation, and the innovative atmosphere in which employees compete with each other will all affect employees'	6.3.1 Yes. An organizational culture with incentives will promote employees' innovative ability. 6.4.1 If there is no incentive mechanism, there is no evaluation	7.3.1 Yes. Organizational culture affects employees' ability to innovate to some extent. Organizations must advocate a cultural atmosphere of diversification of concepts and younger cadres in order to facilitate

Respondent 1	Respondent 2	Respondent 3	Respondent 4	Respondent 5	Respondent 6	Respondent 7
3. Does organizational culture affect employees' ability to innovate? What organizational culture elements do you think influence employees' ability to innovate? 4. How do you think organizational culture affects employees' ability to innovate?						
1.4.1 It can strengthen employee loyalty and make employee values converge with corporate values, thereby further activating employee motivation and stimulating employees'	2.4.1 Let everyone work together. However, some inherent organizational culture is not conducive to employees' innovative ability , such as some people's mindset,	exchanges will continuously promote employees to acquire innovation ability. 3.4.1 The pursuit of perfection will make employees constantly think about possible flaws. During	A leader's style of work also affects innovation, the level of emphasis a leader places on, and determines whether employees work hard to get the job done.	innovation ability. 5.4.1 Leaders' attention and organizational rewards can stimulate employees' enthusiasm for innovation; the innovative atmosphere among	standard for the quality and quantity of work, which will affect the enthusiasm of employees.	the innovation and development of employees. 7.4.1 Younger and more diverse organizational cultures are more inclusive and dynamic.

Respondent 1	Respondent 2	Respondent 3	Respondent 4	Respondent 5	Respondent 6	Respondent 7
3. Does organizational culture affect employees' ability to innovate? What organizational culture elements do you think influence employees' ability to innovate? 4. How do you think organizational culture affects employees' ability to innovate?						
innovative thinking and motivation in the field of work.	unwilling to change the status quo .	the internal communication process of the department, they will look at the same problem from different perspectives, occasionally sparking ideas and promoting employee innovation.		colleagues can play a role in catching up and surpassing.		

Respondent 8	Respondent 9	Respondent 10	Coding round 1	Coding cycle 2	Categorizing (Keyword)	Evaluation
3. Does organizational culture affect employees' ability to innovate? What organizational culture elements do you think influence employees' ability to innovate? 4. How do you think organizational culture affects employees' ability to innovate?						
8.3.1 Yes. Both an organization's values and the positioning of the organization itself influence employee innovation.	9.3.1 Yes. For example, some old -fashioned and conservative cultures are not conducive to the improvement of employees' innovation ability.	1 0.3.1 Yes. For example, the specific cultural atmosphere formed by the collocation of employees in the department will affect the innovation of employees.	10 people agree that organizational culture affects employees' ability to innovate.	Some people think that the school's somewhat conservative culture is not conducive to innovation.	Organization Culture	It is generally believed that the school's organizational culture has advantages, such as school motto, school spirit and school-running philosophy,

Respondent 8	Respondent 9	Respondent 10	Coding round 1	Coding cycle 2	Categorizing (Keyword)	Evaluation
3. Does organizational culture affect employees' ability to innovate? What organizational culture elements do you think influence employees' ability to innovate? 4. How do you think organizational culture affects employees' ability to innovate?						
8.4.1 The value orientation of the organization will have a dominant influence on the innovation tendency of the members of the organization, thereby affecting the formation of employees' innovation ability.	9.4.1 These conservative and overly serious cultures will hamper the development of employees' thinking.	1 0.4.1 A positive team work style will promote personal innovation, and vice versa is not conducive to employee innovation.				which can fully stimulate employee innovation.

Respondent 1	Respondent 2	Respondent 3	Respondent 4	Respondent 5	Respondent 6	Respondent 7
5. Do you think complex work or simple work encourages creative behavior more? Please explain.						
1.5.1 Complex. Finding the characteristics of the relationship between jobs and grasping the logical relationship between jobs is more conducive to employees to systematically grasp the work rules from a macro	2.5.1 I think both are ok. Relatively complex work promotes creativity, because everything has a pattern. No matter how complicated the work, as long as you are good at summarizing and extracting	3.5.1 I think that complex work can encourage creative behavior, because simple problems will make employees habitually follow the existing plan, and may not attract enough attention. Complex	4.5.1 Complex work encourages creative behavior. Because when doing complex work, employees will think about how to simplify complex work, prompting people to think about ways to improve work,	5.5.1 can be. Simplifying complex work is innovation, and enriching and deepening simple work is also innovation.	6.5.1 Complex work encourages creative behavior. Because complex work is more challenging, and solving challenging problems requires extraordinary approaches, employees are encouraged to	7.5.1 Complex work encourages creative behavior. Because relatively speaking, simple work makes it easier to mechanize work, which is not conducive to innovation.

Respondent 1	Respondent 2	Respondent 3	Respondent 4	Respondent 5	Respondent 6	Respondent 7
5. Do you think complex work or simple work encourages creative behavior more? Please explain.						
perspective, and to develop their innovative thinking more logically.	the essence, it can also become simple.	problems will make employees devote more energy to thinking and perfecting solutions. In the process, the solutions will be continuously improved and improved, which is also a creative act.	which is conducive to innovation and improvement of work methods.		constantly change their previous approaches to solving challenging problems.	

Respondent 8	Respondent 9	Respondent 10	Coding round 1	Coding cycle 2	Categorizing (Keyword)	Evaluation
5. Do you think complex work or simple work encourages creative behavior more? Please explain.						
8.5.1 Difficult to judge, probably both. Because creation is an act, it's hard to judge from a complex or simple job perspective.	9.5.1 Complex work encourages more creative behavior, because it motivates employees to continuously explore better ways of working to improve efficiency.	1 0.5.1 Complex work encourages more creative behavior, because complex work forces employees to think and then progress.	Seven people felt that complex jobs were more likely to encourage creative behavior.	3 people felt that both complex work and simple work encourage creative behavior.	work tasks	In general, complex jobs are more likely to encourage creative behavior.

Respondent 1	Respondent 2	Respondent 3	Respondent 4	Respondent 5	Respondent 6	Respondent 7
6. Do you think the current school attaches great importance to innovation?						
1.6.1 is very important. It is mainly reflected in the school 's ideological and political courses and curriculum ideological and political construction, and new breakthroughs have been made.	2.6.1 is very important. The school has established an innovation and entrepreneurship college. The school vigorously advocates employees and students to invent and create.	3.6.1 Pay more attention. It is manifested in teaching, for example, the school constantly updates the information-based teaching equipment and continuously promotes the teachers' information-based teaching ability; management,	4.6.1 is very important. For example, various types of competitions are held in combination with the characteristics of various majors, and students are encouraged to use competitions to promote learning and innovation.	5.6.1 Pay more attention. For example, the school has established innovation and entrepreneurship colleges, industrial colleges, schools and enterprises cooperate in running schools, and innovative talent training models.	6.6.1 takes it very seriously. It is mainly reflected in teaching. For example, the school has created the "30 points of ideological and political" educational activities, which are innovative practices.	7.6.1 takes it very seriously. The main performance is that the school is currently moving towards the goal of high-quality development, and is striving for the opportunity to upgrade to an applied undergraduate course, and

Respondent 1	Respondent 2	Respondent 3	Respondent 4	Respondent 5	Respondent 6	Respondent 7
6. Do you think the current school attaches great importance to innovation?						
For example, the school has built the first party education center in Guangxi Province, which has caused great success in Guangxi Province.	Every year, many employees of the school invent some patents.	in terms of administrative the introduction and use of the OA office system has innovated the working mode.	It also actively guides students to participate in innovation and entrepreneurship competitions, opens innovation and entrepreneurship courses, and carries out innovation and entrepreneurship practice activities.		There are also administrative management, such as the establishment of the first party education center in Guangxi Province, the first experiential ideological and political training center, etc.	innovative development is also what we have been advocating. The school has established an innovation and entrepreneurship college and an industrial college, as well as innovative cooperation with foreign universities in running schools, and innovative talent training models.

Respondent 8	Respondent 9	Respondent 10	Coding round 1	Coding cycle 2	Categorizing (Keyword)	Evaluation
6. Do you think the current school attaches great importance to innovation?						
8.6.1 Pay more attention. Especially in the relevant management system, the school gives each second-tier unit a lot of authority to encourage innovation.	9.6.1 At present, the school attaches more importance to innovation. For example, in the construction of information technology, the school's informatization construction has achieved remarkable results.	1 0.6.1 pay more attention. For example, effective management is carried out by means of informatization. Many aspects of the school are relatively informatized, such as face recognition at the school gate and one-stop service for students, all of which are management innovations.	5 people think that the school attaches great importance to innovation.	5 people think that the school attaches more importance to innovation.	organizational management decision	It is generally believed that the school attaches great importance to innovation and has made new breakthroughs in some aspects.

Respondent 1	Respondent 2	Respondent 3	Respondent 4	Respondent 5	Respondent 6	Respondent 7
7. Can the mix of diversity in the executive department stimulate employee creativity? Why?						
1.7.1 Yes. At present, the staff collocation method in our office is that old staff match new staff, old staff can guide new staff to work, help new staff to grow, help new staff to quickly adapt to work, and new and old staff work together, exchange old and	2.7.1 Yes. I think the way of collocation of office staff is still more important. Everyone has different personalities and different ways of doing things. They need to run in and communicate constantly, and learn from each other's strengths and weaknesses.	The diversity of employees in the administrative department can stimulate the creativity of employees. Our department is a combination of old employees, middle-aged staff and new employees, which can stimulate the creativity of employees. At	4.7.1 Yes. The school currently has a good mix of old, middle-aged and young staff, which can give full play to the role of mentoring. When setting up a team, factors such as professional title, age, gender, professional counterpart, and complementarity	The collocation of diversity can stimulate the creativity of employees. The staffing of our department is more reasonable, and the collocation according to the age structure can give full play to the advantages of each age group in terms of creation. The	6.7.1 Yes. The collocation of employees of different majors and different age groups is conducive to learning from each other, learning from each other's strengths and complementing their weaknesses, and is conducive to discussing and solving different	7.7.1 The diversity of employees is conducive to stimulating creativity. For example, when employees of different ages and personalities are together, employees will be more motivated and stressed, and it will also help employees learn

new ideas, more easy to generate new ideas.	It is easier for people of similar age to match each other and communicate with each other. After the running-in, everyone will match well, which can improve everyone's work efficiency and promote the creativity of employees.	the same time, it is recommended to consider the ratio of male to female in the office, as well as the collocation of employees with different personalities, which can relieve the tense work pressure of the department.	of personality characteristics are taken into account. When working together, they can really use their own strengths through brainstorming, so as to learn from each other's strengths.	ratio of men and women is also relatively balanced, and each employee has different specialties, which can promote the development of work.	problems in the work together.	from each other's strengths and weaknesses. At present, there are only 3 people in our department, and one of them is part - time, so we can't talk about diversity.

Respondent 8	Respondent 9	Respondent 10	Coding round 1	Coding cycle 2	Categorizing (Keyword)	Evaluation
7. Can the mix of diversity in the executive department stimulate employee creativity? Why?						
8.7.1 Overall, the combination of old, middle-aged and young employees is conducive to better work, because old employees have experience, middle-aged employees have the ability, and new employees have passion.	The collocation of employee diversity can stimulate employee creativity. In my department, employees over 40 years old account for the majority, and I think it is appropriate to increase the number of young employees.	1 0.7.1 Our department has few employees, and the way of staff collocation is relatively simple. At present, it is a model of collocation of new and old staff.	10 people believe that the diversity of staff in the administrative department can stimulate the creativity of employees. At present, the school staff matching method is the matching method of old staff,	Some people think that the diversity of personalities and professions can also stimulate the creativity of employees.	Staff collocation	The mix of diversity (age, personality, professionalism) in the executive department can stimulate employee creativity.

Respondent 8	Respondent 9	Respondent 10	Coding round 1	Coding cycle 2	Categorizing (Keyword)	Evaluation
7. Can the mix of diversity in the executive department stimulate employee creativity? Why?						
However, the proportion of old leaders in individual departments of the department is too high.	Old employees, middle-aged employees, and young employees should be matched equally, and the mix of liberal arts and science majors should also be considered.	This method is also conducive to innovation, because employees of different ages will have a lot of collision of ideas, which can stimulate the creativity of employees.	middle-aged teaching staff and new staff.			

Respondent 1	Respondent 2	Respondent 3	Respondent 4	Respondent 5	Respondent 6	Respondent 7
8. What factors do you think affect the formation of innovative thinking and the application of problem-solving skills?						
1. 8.1 The work sticks to the rules, which is not conducive to the formation of innovative thinking. Job rank affects the angle from which people look at problems. Employees with different positions look at problems from different heights. Therefore,	2.8.1 Influencing factors include personal fixed way of thinking that is difficult to change, and some leadership styles. If the leadership's thinking is not broad enough, it will also affect the formation of subordinates' innovative thinking.	3.8.1 The influencing factors are mainly the working atmosphere of the department and the personality of the individual. The working mechanism of the department is the most important influencing factor,	4.8.1 The influencing factors include personal character, such as whether to be aggressive, willing to take risks, try new things, etc.	5.8.1 The relationship between employees may affect the formation of innovative thinking, but it is not the main one. The key is whether the individual has a sense of innovation and	6.8.1 The factors that affect the formation of innovative thinking are mainly personal professional ability, work experience and thinking mode.	7.8.1 Unscientific educational methods are the key factors hindering the formation of innovative thinking. Only by innovating the management system can we cultivate people with innovative thinking.

Respondent 1	Respondent 2	Respondent 3	Respondent 4	Respondent 5	Respondent 6	Respondent 7
employees must learn to look at problems from the perspective of leaders.	It takes more communication and more research to come up with solutions that meet the actual needs.	which will affect the thoughts and behaviors of employees. Followed by personal characteristics, introverted people can form innovative thinking through certain methods.		whether he will take the initiative to think and solve problems.	The administrative level and interpersonal relationship of employees will have a certain influence on the formation of innovative thinking, but it is not the main one.	The management system is unscientific, and no amount of ideas and problem-solving skills can be implemented.

Respondent 8	Respondent 9	Respondent 10	Coding round 1	Coding cycle 2	Categorizing (Keyword)	Evaluation
8. What factors do you think affect the formation of innovative thinking and the application of problem-solving skills?						
8.8.1 There are four main, personal knowledge structure and personal characteristics, and work environment. There are also individual job roles, such as different levels and categories,	9.8.1 Both personal initiative and environmental factors will affect the formation of innovative thinking and the application of problem-solving skills.	1 0.8.1 Mainly include personal professional knowledge reserve, personal character and ability and school work environment, etc., which will affect the formation of innovative thinking and	Most of them think that the factors affecting the formation of innovative thinking and the application of problem-solving skills are personal factors, including personal characteristics, positions, and work experience.	Some people think it has something to do with the leadership style of their department.	Barriers to innovation	The factors affecting the formation of innovative thinking and the application of problem-solving skills mainly include personal (character, rank, work method, work experience),

Respondent 8	Respondent 9	Respondent 10	Coding round 1	Coding cycle 2	Categorizing (Keyword)	Evaluation
and often different ways of looking at problems.		the application of problem-solving skills.	There are also school factors, including management system, work environment, etc.			departmental leadership style and school (environment, culture) and other factors.

Respondent 1	Respondent 2	Respondent 3	Respondent 4	Respondent 5	Respondent 6	Respondent 7
9. Do you think innovation seminar (training) can cultivate employees' innovative thinking and problem-solving skills?						
1.9.1 Yes. The school regularly holds different types of training classes every year to continuously improve	2.9.1 Yes. Have not participated in any training or seminars on innovation, would like to attend if the	3.9.1 would have some effect, but not as much. Because innovative thinking requires accumulation	4.9.1 Yes. Not long after I entered the school, I participated in some trainings,	5.9.1 Yes. Therefore, the school also organizes some innovative training.	6.9.1 Yes. Brainstorming through seminars is conducive to stimulating employees' innovative	The effect of cultivating ability through innovation seminars is not obvious, and it

Respondent 1	Respondent 2	Respondent 3	Respondent 4	Respondent 5	Respondent 6	Respondent 7
9. Do you think innovation seminar (training) can cultivate employees' innovative thinking and problem-solving skills?						
the professional level and working ability of teachers. In the training process, in addition to the conventional theoretical knowledge transfer, topic seminars are also added to ensure the quality of training seminars.	opportunity arises. It is recommended that schools regularly hold relevant training to expand the scope of training personnel and strive for everyone to have the opportunity to participate.	and continuous thinking on the basis of solid knowledge to form, the ability to solve problems also requires accumulation and learning to obtain. It is suggested that schools should appropriately add some examples	which allowed me to quickly integrate into the school and at the same time promote my thinking about work. It can be said that some targeted training can indeed cultivate employees' innovative thinking and	However, the coverage is small. It is recommended to increase the coverage of training and carry out targeted innovative training for different professional backgrounds and job needs.	thinking and problem-solving skills. The school has held similar seminars, and it is recommended to talk less about theoretical content, share more typical cases and guide personal thinking, increase on-site teaching, and	has not been able to cultivate innovation ability and problem-solving ability in essence, but it will have some effects in the short term. It is recommended to build an innovative training system, so that

Respondent 1	Respondent 2	Respondent 3	Respondent 4	Respondent 5	Respondent 6	Respondent 7
9. Do you think innovation seminar (training) can cultivate employees' innovative thinking and problem-solving skills?						
		of innovative practices to solve problems from a micro perspective in terms of training, so as to inspire employees.	improve their ability to solve problems.		increase the practicality and vitality of training.	employees' innovative ideas can be deeply rooted in their hearts, and innovative thinking becomes a habit.

Respondent 8	Respondent 9	Respondent 10	Coding round 1	Coding cycle 2	Categorizing (Keyword)	Evaluation
9. Do you think innovation seminar(training) can cultivate employees' innovative thinking and problem-solving skills?						
8.9.1 Yes. But the effect is small. The school has held some seminars and trainings, mainly focusing on discipline construction and school development orientation. Innovation requires more	9.9.1 Effective, high-quality training promotes innovative thinking among employees. As far as I know, the school has not held similar training. It is recommended that the school invite	1 0.9.1 yes. The school has held some trainings, but it is not clear whether it is innovative or not. Because there are many employees in the school, it is recommended to carry out training at different levels and categories,	9 people believe that innovation seminars (training) can promote the formation of employees' innovative thinking.	1 person believes that there is only a certain promotion effect, and the effect will not be very large.		Training can indeed develop employees' innovative thinking and improve their problem-solving skills. It is recommended that schools hold more innovative theme trainings, and strive to train all school

Respondent 8	Respondent 9	Respondent 10	Coding round 1	Coding cycle 2	Categorizing (Keyword)	Evaluation
9. Do you think innovation seminar(training) can cultivate employees' innovative thinking and problem-solving skills?						
precipitation and accumulation.	authoritative experts to guide and train on the development of the school.	so that all employees can participate in innovation training within a certain period of time.				employees within a certain period of time.

Respondent 1	Respondent 2	Respondent 3	Respondent 4	Respondent 5	Respondent 6	Respondent 7
10. What do you think are the barriers to communication in your current department?						
1. 10.1 Smooth communication within the department. Communication with some other departments will be hindered. The main reason is that some departments have a low position to consider problems, and communication cannot be	2.10.1 I think the communication within this department is relatively smooth. Communication with other departments is also relatively smooth. Occasionally, there is a lack of smooth communication with other	3.10.1 The communication within the department is smooth, and the leaders are patient and encourage us to report and communicate more. Communication between the department and the school is not smooth enough. Because when	4.10.1 The internal communication of this department is relatively smooth. I think personal attitudes and departmental culture can hinder communication effectiveness.	5.10.1 The department communicates smoothly. Inter-departmental communication is still relatively low. It is recommended to organize more school-wide cross-departmental trainings and activities.	6.10.1 The department communicates smoothly. The main obstacle is that the division of responsibilities within the department is not clear enough, which is not conducive to the development of work.	7.10.1 The department communicates smoothly. The main factor hindering communication is that some hardware facilities are not in place. For example, after some departments were established,

Respondent 1	Respondent 2	Respondent 3	Respondent 4	Respondent 5	Respondent 6	Respondent 7
10. What do you think are the barriers to communication in your current department?						
considered from the height of the school at the same time.	departments, mainly due to the unfamiliarity with the leaders of other departments and the strong style of individual leaders.	secondary colleges (departments) encounter specific problems, the general practice is for the leaders of secondary colleges (departments) to communicate with school leaders. In addition, the level of staff will also affect the effect of communication.				they failed to provide work telephones in time, which led to difficulties in communication between departments and departments and off-campus units.

Respondent 8	Respondent 9	Respondent 10	Coding round 1	Coding cycle 2	Categorizing (Keyword)	Evaluation
10. What do you think are the barriers to communication in your current department?						
8.10.1 The communication of this department is generally smooth. At present, the biggest obstacle to communication comes from the unfamiliarity of the faculty and staff with the school's	9.10.1 Communication is relatively smooth, but the communication channel is relatively simple, mainly by telephone. It is recommended to have more opportunities for communication, such as holding	1 0.10.1 The department communicates smoothly. The main factor affecting communication should be the leadership style of the department. A leader with weak leadership will have a certain	10 people feel that their departments communicate well.	1 person also believed that the department's communication method was single. 1 person thinks that the communication between this department and other departments is not smooth. 1 felt that the communication	communicate	It is generally believed that the communication in the unit where they work is smooth. But communication between individual departments and other departments and schools is not smooth enough.

Respondent 8	Respondent 9	Respondent 10	Coding round 1	Coding cycle 2	Categorizing (Keyword)	Evaluation
10. What do you think are the barriers to communication in your current department?						
management mechanism itself, and the lack of concern among some of the faculty and staff about the school's operating mechanism and the school's key tasks.	cross-departmental cooperation activities and so on.	impact on the communication of the department.		between the department and the school was not smooth enough.		The main reason is that there are few inter-departmental communication channels and the communication mechanism has not yet been formed.

Respondent 1	Respondent 2	Respondent 3	Respondent 4	Respondent 5	Respondent 6	Respondent 7
11. Do you think that establishing a trusting relationship among employees and creating a good organizational atmosphere will promote employee creativity?						
1. 11.1 A good working atmosphere and the establishment of trusting relationship with employees at work will make people happier and indeed promote the creativity of employees. At work, if there is a conflict in interpersonal	2.11.1 Yes. Because a good organizational atmosphere makes people relaxed and happy, and a relaxed and happy mood can stimulate people's creativity. If there is a crisis of confidence, it is more a conflict of ideas.	3.11.1 Yes. A situation of distrust can arise, and it is generally the information that is communicated privately with employees that is circulated. When encountering this kind of problem, I usually ask the other party to	4.11.1 Yes. In the course of the work, there will be differences in the perception of the problem, but it will not lead to a relationship of distrust. In response to the inconsistency of ideas, they will choose to seek common ground	5.11.1 Yes. At work, there are times when there is a crisis of confidence. The solution is to seek common ground while reserving differences.	6.11.1 Yes. A good organizational atmosphere is conducive to employees having a relaxed, happy and positive work mood, and is conducive to enhancing employee creativity.	7.11.1 No. _ Creating a good organizational atmosphere cannot directly promote, but it is conducive to the cultivation of employees' creativity. It is normal for employees to have conflicting ideas.

Respondent 1	Respondent 2	Respondent 3	Respondent 4	Respondent 5	Respondent 6	Respondent 7
11. Do you think that establishing a trusting relationship among employees and creating a good organizational atmosphere will promote employee creativity?						
relationships, I will maintain a problem-solving mentality, listen carefully to the other party's opinions, communicate with the other party in a timely manner, and resolve the conflict.	When encountering similar problems, I will comprehensively consider which factors are more conducive to the development of the work, and good opinions will be adopted, with the ultimate goal of effectively carrying out the work.	stop doing such a thing, and at the same time, I will also consider whether I can continue to discuss with the other party privately about specific work issues.	while reserving differences: they will further communicate directly, clarify their reasons and basis, express their intentions and goals, and strive to achieve consensus in mutual communication.		Sometimes in the work, there will be conflicts of ideas and opinions, and I will express my own opinions, but the final decision-making is mainly based on the leadership.	I am more willing to let ideas collide to spark new sparks.

Respondent 8	Respondent 9	Respondent 10	Coding round 1	Coding cycle 2	Categorizing (Keyword)	Evaluation
11. Do you think that establishing a trusting relationship among employees and creating a good organizational atmosphere will promote employee creativity?						
8.11.1 Yes. There has been no crisis of confidence. There will be disputes in the work, but different views collide and complement each other, which is conducive to the effective development of the work.	9.11.1 Yes. Conflict of ideas is inevitable, and the way to deal with it is to combine the most suitable viewpoints, not one-sided adoption.	1 0.11.1 Yes. Generally speaking, when encountering a crisis of trust, I will try my best to focus on work and take a positive approach to resolve the crisis.	9 people believe that building trust between employees and creating a good organizational atmosphere will promote employee creativity.	1 person believes that creating a good organizational atmosphere cannot directly promote, but is conducive to the cultivation of employees' creativity.	organizational atmosphere	Building trusting relationships among employees and creating a good organizational climate does promote employee creativity.

Respondent 1	Respondent 2	Respondent 3	Respondent 4	Respondent 5	Respondent 6	Respondent 7
12. Do you think there are any ways to promote the improvement of personal creativity?						
1.12.1 Yes, individual creativity can be developed. Employees can continue to learn, increase their knowledge reserves, and improve their ability to identify and solve problems. In addition, schools can carry out on-	2.12.1 Yes. Individual teachers should learn more by themselves, and schools should also organize more relevant creative activities. You can also go to well-known institutions to learn from the excellent	3.12.1 Yes. This has to do with job requirements and working atmosphere. For example, for the same repetitive work, each time it is required to make progress over the last time, which can subtly affect creativity. Suggestion 1.	4.12.1 Yes. Employees themselves should strengthen theoretical study, improve their professional and technical skills, and lay a solid foundation for the cultivation of creative ability. Schools should provide more opportunities for	5.12.1 Yes. There are the following ways: to provide training in creativity, broaden the horizons of employees. Create a stronger atmosphere of innovation and entrepreneurship, hold various innovation competitions for	6.12.1 Yes. Improving creativity requires the joint efforts of schools, departments and individuals to form a synergy. Individuals should take the initiative to improve their professional and technical level.	7.12.1 Yes. But it depends on the stage. The younger the age, the better the cultivation of creative ability. To be creative, you must first have critical thinking. To cultivate critical thinking from an early age is what we lack most.

Respondent 1	Respondent 2	Respondent 3	Respondent 4	Respondent 5	Respondent 6	Respondent 7
12. Do you think there are any ways to promote the improvement of personal creativity?						
campus training, or send some teachers out for training, which can quickly promote individual creativity.	experience of others.	Administrative personnel should conduct moderate job mobility after a certain number of tenures, because different jobs have different requirements and can cultivate different ways and angles of thinking.	exchanges and learning, and the formation of some teams should strengthen the construction of talent echelons, so as to prepare for the cultivation of more outstanding talents with innovative ability.	teachers and students, and promote. Establish a detailed innovation reward mechanism to stimulate employees' enthusiasm for innovation.	Departments should provide opportunities and create an environment, and schools should provide platforms and incentives to exert their creativity.	

Respondent 1	Respondent 2	Respondent 3	Respondent 4	Respondent 5	Respondent 6	Respondent 7
12. Do you think there are any ways to promote the improvement of personal creativity?						
		2. Build a communication platform to promote the exchange of experience and methods of employees, but further research is needed on what platform to build and how to ensure the corresponding effect.				

Respondent 8	Respondent 9	Respondent 10	Coding round 1	Coding cycle 2	Categorizing (Keyword)	Evaluation
12. Do you think there are any ways to promote the improvement of personal creativity?						
8.12.1 Yes. It is recommended that individuals read more to increase their knowledge. You can also cooperate with high- level experts outside the school to promote personal ability development.	9.12.1 Yes. Creating a good environment and increasing policy support, such as giving scientific research project support and strengthening personal learning, can promote the improvement of personal creativity.	10.12.1 Perhaps, I think it is more difficult to cultivate individual creative ability. There are some ways to promote the creativity of employees, such as employees learning according to their own goals, or schools providing	9 people think that individual's creative ability can be cultivated.	1 person is not sure, thinks that the individual's creative ability is difficult to cultivate.	Cultivation of creative ability	Strengthening self-study for employees, the school provides training opportunities, builds more communication and learning platforms between faculty and staff inside and outside the school, and

Respondent 8	Respondent 9	Respondent 10	Coding round 1	Coding cycle 2	Categorizing (Keyword)	Evaluation
12. Do you think there are any ways to promote the improvement of personal creativity?						
		employees with effective training.				establishes an innovative reward mechanism to promote employees' innovative thinking and ability.

Respondent 1	Respondent 2	Respondent 3	Respondent 4	Respondent 5	Respondent 6	Respondent 7
13. How do you think the inner enthusiasm of employees should be stimulated to increase creativity?						
1. 13 .1 The school can stimulate the internal enthusiasm of employees through the performance reward system. The school's current performance distribution is determined by each department, and some	2.13.1 Can absorb the latest information from various aspects (including the Internet, QQ, WeChat, new media platforms, etc.), receive new information, and easily promote the formation of creativity. The reward system can also be used.	3.13.1 To stimulate the inner enthusiasm of employees, there must be an inclusive environment that allows employees to have a certain space for trial and error.	4.13.1 Suggestions: (1) Create a working atmosphere that values and respects talents. (2) Improve the work environment and improve the hardware facilities. (3) Introduce talents and form a progressive and harmonious talent team.	5.13.1 Suggestion: (1) Create a good environment and atmosphere, so that innovative ideas can be deeply rooted in the hearts of the people. (2) The school has an innovative reward mechanism,	6.13.1 Suggestion: Continuously improve the existing innovative incentive mechanism, for example, in the performance distribution, the performance distribution indicators of employees' positions and	7.13.1 It is recommended that schools establish a good incentive mechanism. For example, pay more attention to the career planning and guidance of employees, and stimulate the spirit of employees. It can also strengthen

Respondent 1	Respondent 2	Respondent 3	Respondent 4	Respondent 5	Respondent 6	Respondent 7
13. How do you think the inner enthusiasm of employees should be stimulated to increase creativity?						
departments have more reasonable performance distribution. The employees of these departments have a strong sense of happiness and are more creative. However, the performance distribution of some departments is unreasonable,	The current performance reward system is still relatively scientific.	In the reward mechanism, both material and spiritual rewards can be given equal attention, and affirming employees can also stimulate their inner motivation and creativity. In terms of material rewards, we can continue to improve	(4) Improve work remuneration and improve the secondary distribution system of departmental reward performance, which truly reflects the distribution concept of distribution	which is more reflected in the reward to the department. It is recommended to refine and innovate the reward method for different positions, taking into account the professional teachers, administrative staff and other positions.	titles should be reduced, and the number and quality of work should be the main distribution principles, so that all employees can be truly and effectively motivated.	the cultivation of employees' innovative ideas to increase their creativity.

Respondent 1	Respondent 2	Respondent 3	Respondent 4	Respondent 5	Respondent 6	Respondent 7
13. How do you think the inner enthusiasm of employees should be stimulated to increase creativity?						
and the rewards obtained by employees vary greatly, which causes individual employees to lose their motivation to work.		the school's reward system. It is suggested that the reward coefficient should be determined by position, and then the administrative staff and full-time teachers will separately count their bonus items.	according to work and more pay for more work.		Give play to the role of innovation platforms such as the Innovation and Entrepreneurship Academy.	

Respondent 8	Respondent 9	Respondent 10	Coding round 1	Coding cycle 2	Categorizing (Keyword)	Evaluation
13. How do you think the inner enthusiasm of employees should be stimulated to increase creativity?						
8.13.1 Employees should always be motivated and given space to give them the opportunity to expand their horizons.	9.13.1 It is suggested to stimulate their enthusiasm with material rewards such as money and honorary certificates. Creativity can also be linked to employee promotion to arouse everyone's interest.	1 0.13.1 It is recommended to strengthen the construction of organizational cultural connotation and improve incentive measures, such as strengthening the publicity of outstanding employees, and	Most people suggest to stimulate the internal enthusiasm of employees by improving the reward system (material, spiritual), creating a good work	Some people suggested that the use of platforms such as the Internet to increase employees' access to information and promote creativity.	Stimulate the inner enthusiasm of employees	By improving the relevant incentive system and creating a good environment, the school can stimulate the inner enthusiasm of employees and increase the creativity of employees

Respondent 8	Respondent 9	Respondent 10	Coding round 1	Coding cycle 2	Categorizing (Keyword)	Evaluation
13. How do you think the inner enthusiasm of employees should be stimulated to increase creativity?						
		improving employees' sense of identity and honor.	environment, including a cultural atmosphere that respects talents.			

Respondent 1	Respondent 2	Respondent 3	Respondent 4	Respondent 5	Respondent 6	Respondent 7
14. Do you think employees' high creativity can promote job performance?						
1.1 4.1 Yes. The leaders of our department are highly creative people..	2.1 4.1 Yes. People with high creativity will have outstanding work ability and can improve work efficiency.	3.14.1 Yes. Some teachers in this department are highly effective because of their sensitivity,	4.14.1 Not necessarily. But depending on the actual situation, some people are highly creative, but they only talk and do not act,	5.14.1 Yes. Many teachers in the school are highly creative people,	6.14.1 Yes. For example, people in the school information center department have high creativity,	7.14.1 Yes. The creativity of a single person is not high, and it is often a team with high creativity.

Respondent 1	Respondent 2	Respondent 3	Respondent 4	Respondent 5	Respondent 6	Respondent 7
14. Do you think employees' high creativity can promote job performance?						
There are many urgent matters in the office, but the leaders can arrange them reasonably and complete the tasks efficiently		familiarity and execution of the work content. Focus on your own work, and continue to research after you have an initial idea, so as to increase your awareness and improve your work efficiency.	their attitude is not serious, and their work efficiency is not necessarily high.	especially the teachers of the School of Logistics. They participate in the formulation of industry standards and have high professional and innovative qualities, and their work efficiency is obvious.	and they continuously improve the work efficiency of various departments of the school by improving the level of school informatization. Schools should attach importance to information construction.	The team can overcome many problems and improve work efficiency.

Respondent 8	Respondent 9	Respondent 10	Coding round 1	Coding cycle 2	Categorizing (Keyword)	Evaluation
14. Do you think employees' high creativity can promote job performance?						
8.14.1 Not necessarily a positive correlation. If a person has high creativity, but no actual action, it still does not promote job performance.	9.14.1 Yes. I think that employees in science and engineering are highly creative, because they have achieved leading achievements in scientific research achievements, teaching reform, etc., and their work performance is very high.	1 0.14.1 Yes. For example, the person in charge of our department has high creativity, and is good at analyzing problems with science and engineering thinking, and his work efficiency is very high.	8 people think that the high creativity of employees can promote the improvement of job performance.	2 think that the high creativity of employees does not necessarily promote the improvement of job performance.	work performance	Highly creative employees do boost job performance

1. 15. 1 Maybe. It depends on whether the professional knowledge you have is compatible with the field of work. If the professional technology does not correspond to the work task, it will not promote work innovation.	2.15.1 will not. It is not that the richer the professional knowledge, the stronger the innovation ability. Because expertise and innovation are not directly linked.	3.15.1 Maybe. This situation varies from person to person and has a certain relationship with the individual's style of doing things. The more solid professional skills some people have, the more comprehensive	4.15.1 Yes. Because one of the influencing factors of innovation is the individual 's learning ability and the thickness of knowledge reserves, different fields have different requirements for the professional skills mastered by individuals.	5.15.1 Yes. Because innovation must have certain professional technical support, in order to better innovate. Professional knowledge is the foundation of innovation. Only by understanding the frontier dynamics and	6.15.1 Yes. Because the thinking mode of different professional technologies will be different, the degree of innovation awareness will be different. The richer the professional knowledge,	7.15.1 Yes. Innovation requires certain foundations and conditions, and professional technology is the foundation. Rich professional knowledge does not necessarily mean stronger innovation ability, but more

Respondent 1	Respondent 2	Respondent 3	Respondent 4	Respondent 5	Respondent 6	Respondent 7
15. Do you think personal expertise affects innovation? 1 6. Does the richer the professional knowledge, the stronger the innovation ability? Please explain.						
		they will consider problems, and they will continue to look for effective solutions. Some people may become accustomed to empirical practices and will not innovate.	Professional knowledge is not directly proportional to innovation ability. In addition to professional knowledge, there are also work attitude (personal willingness), organizational emphasis, hands-on ability, and hobbies that affect innovation ability.	development trends of a certain field in the world today can we carry out targeted innovation and solve problems in this field.	the stronger the innovation ability, because the rich professional knowledge is the foundation of the innovation ability.	conducive to the realization of innovation.

Respondent 8	Respondent 9	Respondent 10	Coding round 1	Coding cycle 2	Categorizing (Keyword)	Evaluation
15. Do you think personal expertise affects innovation? 1 6. Does the richer the professional knowledge, the stronger the innovation ability? Please explain.						
8.15.1 Yes. It will have a positive impact on innovation, but the limited grasp of professional knowledge may also limit people's vision and hinder innovation.	9.15.1 Yes. Because individuals only possess technology and do not understand new situations and new information, it will have a certain impact on innovation.	1 0.15.1 maybe. Because individuals believe that innovation ability and professional knowledge are not proportional, sometimes professional knowledge is a kind of imprisonment for innovative	Six felt that the expertise an individual possesses has a positive impact on innovation.	3 were not sure, 1 believed that the expertise possessed by individuals would not affect innovation.	personal technical knowledge	The solid professional knowledge of the individual will promote innovation, but it depends on the individual's good thinking and positive work attitude.

Respondent 8	Respondent 9	Respondent 10	Coding round 1	Coding cycle 2	Categorizing (Keyword)	Evaluation
15. Do you think personal expertise affects innovation? 1 6. Does the richer the professional knowledge, the stronger the innovation ability? Please explain.						
Innovation is a kind of ability, not the more knowledge you have, the more you can innovate.	The richer professional knowledge you have, the more extensive and specialized knowledge you have, which can expand people's thinking.	thinking, and it is difficult to break through.				

Respondent 1	Respondent 2	Respondent 3	Respondent 4	Respondent 5	Respondent 6	Respondent 7
17. Do you think the use of educational management information systems, such as office automation software, can increase innovation? 18. Do you think the school's current office automation system can be improved?						
1.17.1 The office automation system cannot increase innovation, because the system is fixed and must be done according to the prescribed procedures.	2.17.1 Yes, the current office automation system is more practical. 2.18.1 When issuing a business notification to the whole school, it would be better if it could be released to all departments with one click;	3.17.1 Yes. The current office system can basically meet various office needs. 3.18.1 If the technology is feasible, it is recommended to combine the educational administration system and	4.17.1 Yes. The school's OA office system is relatively easy to use. 4.18.1 Some functions of academic affairs and student management should consider how to integrate better. For example, the lecture system	5.17.1 Yes. The school's OA system is easy to use. 5.18.1 It is recommended to expand the system functions, get through the links between various departments and systems, and realize data sharing.	6.17.1 Yes. The school's OA system is relatively easy to use, but it should be further improved. 6.18.1 The information integration of each information system should be strengthened to reduce the waste of human,	7.17.1 Yes. The school office automation system is also relatively easy to use. This system optimizes work, saves time, and provides a foundation for innovation.7.18.1 However, the system process still needs to be

Respondent 1	Respondent 2	Respondent 3	Respondent 4	Respondent 5	Respondent 6	Respondent 7
17. Do you think the use of educational management information systems, such as office automation software, can increase innovation?						
18. Do you think the school's current office automation system can be improved?						
1. 18. 1 At present, the school's office automation system can meet the work needs, and the school's various work processes are relatively standardized. However, the communication and learning of the system process did not	using some processes, such as logging in with a department account to fill in the "Major Events" process sheet, the system can simultaneously display the remaining number of applications, so more convenient.	financial accounting system with the school's OA system.	cannot directly query the teacher's class schedule for the entire semester, which is not conducive to the teacher's lecture arrangement.		material and financial resources. For example, there is an educational administration system in educational affairs, and a financial system in financial affairs, and the integration and development are not enough.	further sorted out and improved, and the manual printing and submission of the stamp application process is still used.

Respondent 1	Respondent 2	Respondent 3	Respondent 4	Respondent 5	Respondent 6	Respondent 7
17. Do you think the use of educational management information systems, such as office automation software, can increase innovation? 18. Do you think the school's current office automation system can be improved?						
achieve the desired effect. For example, the newly implemented document processing process, because the learning and communication were not enough, some employees would not use it, resulting in passive work.						

Respondent 8	Respondent 9	Respondent 10	Coding round 1	Coding cycle 2	Categorizing (Keyword)	Evaluation
17. Do you think the use of educational management information systems, such as office automation software, can increase innovation? 18. Do you think the school's current office automation system can be improved?						
8.17.1 Not necessarily. Innovation is more from the function of the main body. The office automation system is used by people, and some people may not use it well.	9.17.1 Yes. The school's current office automation system is relatively easy to use. 9.18.1 It is suggested that the mobile client can be improved more smoothly.	1 0.17.1 cannot. 10.18.1 There is obviously room for further optimization of the school's office automation system, and some processes can be further clarified, such as setting the number of document	7 people believe that the use of information technology such as education management information system can increase employee innovation.	2 people think that the use of information technology such as education management information system cannot increase employee innovation. 1 person is not sure.	Informatization	Everyone thinks that the school's OA office system is easier to use, but some workflows need to be optimized.

Respondent 8	Respondent 9	Respondent 10	Coding round 1	Coding cycle 2	Categorizing (Keyword)	Evaluation
17. Do you think the use of educational management information systems, such as office automation software, can increase innovation? 18. Do you think the school's current office automation system can be improved?						
8.18.1 The school's office automation system is not bad, and there is no suggestion for improvement.		releases, because work will change, and each department needs to control the number of documents issued on the system, which is not very important. Realistic. Until some processes are not optimized and clarified, it is not conducive to increase innovation by still following the old process.				

Respondent 1	Respondent 2	Respondent 3	Respondent 4	Respondent 5	Respondent 6	Respondent 7
19. Do You think strong leadership in the executive branch increases innovation?						
1. 19.1 Yes. If the department leader has strong leadership, can reasonably divide the labor according to the characteristics of the employees, and is loved by the employees, the creativity of the department will naturally increase.	2.19.1 Yes. Leaders with strong leadership will lead the staff to complete more tasks and achieve greater achievements. recommended that department leaders listen to the opinions of front-line employees,	3.19.1 Yes. Some departmental affairs are very policy-oriented, and work is mainly carried out based on superior documents. Strong leadership can promote innovation and lead departments to complete tasks faster and more efficiently.	4.19.1 Yes. Strong leadership means having a strong team with strong team ability, ready to deal with emergencies and solve new problems at any time. Leaders can listen to the opinions of employees more, be democratic in	5.19.1 Yes. First leaders guide and cultivate an atmosphere of innovation. Second, leaders attach importance to and take the lead in carrying out innovative work. The third is to commend and reward innovative	6.19.1 Yes. The department encourages innovation through a performance distribution point system. Department leaders are role models for employees, and they should give full play to their leadership.	7.19.1 No. _ Departmental leadership Strong leadership and innovation are not directly related. The key is to work hard, have ideas and leadership, and it is difficult to innovate if you do not do it practically.

Respondent 1	Respondent 2	Respondent 3	Respondent 4	Respondent 5	Respondent 6	Respondent 7
19. Do You think strong leadership in the executive branch increases innovation?						
Leaders can impart more work experience to employees and improve their work ability. At the same time, supplemented by heuristic guidance, they can exercise employees' work thinking, which can fully stimulate	because some of the opinions and suggestions of employees are summed up after their personal experience, and being good at listening is also a must-have for excellent leaders. Communicating more and being good at listening	It is recommended that under the premise of meeting the policy requirements of the superior, continuously optimize and improve the data statistical forms used by their own departments, and refine and quantify the content of the assessment.	the whole process of work, strive for everyone's approval, and gain everyone's support to achieve collaborative innovation.	models, and use advanced models to drive the innovation of the department as a whole.		It is recommended to continue to implement the existing personnel management system, and to strengthen exchanges and learning among leaders and personnel of various departments.

Respondent 1	Respondent 2	Respondent 3	Respondent 4	Respondent 5	Respondent 6	Respondent 7
19. Do You think strong leadership in the executive branch increases innovation?						
employees' innovative motivation.	to suggestions is a good way to improve work efficiency.	Department leaders can support this work by encouraging and guiding. Department leaders can also supervise and form a complete work flow chart of the department to standardize the operation of the department.				

Respondent 8	Respondent 9	Respondent 10	Coding round 1	Coding cycle 2	Categorizing (Keyword)	Evaluation
19. Do You think strong leadership in the executive branch increases innovation?						
8.19.1 Maybe. Strong leadership can enhance innovation in most cases, but it also has the risk of depleting innovation ability! It is recommended that leaders personally participate in key tasks,	9.1 9.1 Yes. It is recommended that leaders adopt a more appropriate and relaxed management approach. Lead the department to create a more active and relaxed office environment.	10.1 9.1 Yes. It is suggested that leaders should play a central role, constantly broaden their thinking, and guide the employees of the department to be positive and good at learning and thinking.	Eight people believe that strong leadership in the executive branch increases innovation.	1 believed that strong leadership in the executive branch did not increase innovation. 1 person is not sure.	leadership	Leaders should continuously improve their management capabilities, cultivate a good working atmosphere in the department, and lead the employees of the department to complete their work faster and more efficiently.

Respondent 8	Respondent 9	Respondent 10	Coding round 1	Coding cycle 2	Categorizing (Keyword)	Evaluation
19. Do You think strong leadership in the executive branch increases innovation?						
such as how to better apply the performance distribution system, reasonably distribute performance rewards, and motivate employees to work hard .						They should also listen to the opinions of employees and play the core role of leadership.

Respondent 1	Respondent 2	Respondent 3	Respondent 4	Respondent 5	Respondent 6	Respondent 7
20. Do you think creating a personal growth mechanism can stimulate personal creativity?						
21. How do you think the school's personal growth mechanism should be improved?						
1.20.1 Yes. Schools currently have inadequate mechanisms for promoting personal growth. 1.21.2 The system of scientific research ability improvement or scientific research guidance should be improved.	2. 20.1 Yes, the school 's personal growth mechanism is not yet perfect. 2.21.2 It is recommended to improve the system of personal title declaration, scientific research and teaching ability improvement and	3.20.1 Yes, the current personal growth mechanism needs to be further improved. 3.21.2 I think the form of teamwork can be adopted at present, such as a teaching team, with old, middle-aged and young	4.20.1 Yes, the school 's personal growth mechanism is relatively complete at present. 4.21.2 The number of opportunities for individual training, exchange learning and training is	5.20.1 Yes, the school 's personal growth mechanism is relatively complete at present. 5.21.2 Lack of career planning guidance and tracking mechanism for administrative personnel, lack of training and		7.20.1 Yes. The school 's personal growth mechanism needs to be further improved. 7.21.1 The experience transfer between old employees and new employees in various

Respondent 1	Respondent 2	Respondent 3	Respondent 4	Respondent 5	Respondent 6	Respondent 7
20. Do you think creating a personal growth mechanism can stimulate personal creativity?						
21. How do you think the school's personal growth mechanism should be improved?						
I have little experience in project declaration and I am at a disadvantage in professional title evaluation, but the school does not have relevant systems to guide this type of employees to promote the development of employees.	guidance. According to the situation of new faculty members and veteran teachers, different levels of growth mechanisms can be provided to guide them in a targeted manner.	employees or employees with different levels of professional titles, which can further help new employees grow and develop.	limited and the requirements are relatively high, which to a certain extent makes young groups (or groups with lower professional titles) lose opportunities for further learning and progress, and there is a problem of	guidance such as professional title declaration. It is recommended that personal growth guidance and training should cover all types of staff.	6.20.1 Yes. The school's personal growth mechanism is not perfect. 6.21.1 Different growth mechanisms should be formulated according to different positions. For example,	departments should be advocated, so that new employees can acquire more and more comprehensive tacit knowledge like masters and apprentices. In addition, more conditions can be created to help employees grow.

Respondent 1	Respondent 2	Respondent 3	Respondent 4	Respondent 5	Respondent 6	Respondent 7
20. Do you think creating a personal growth mechanism can stimulate personal creativity?						
21. How do you think the school's personal growth mechanism should be improved?						
			concentrated opportunity distribution. It is recommended to pay more attention to young employees in the study and training.		administrative staff are usually busy with work, resulting in less practice in scientific research and relatively weak scientific research ability. In this regard, they should focus on guidance.	

Respondent 8	Respondent 9	Respondent 10	Coding round 1	Coding cycle 2	Categorizing (Keyword)	Evaluation
20. Do you think creating a personal growth mechanism can stimulate personal creativity? 21. How do you think the school's personal growth mechanism should be improved?						
8.20.1 Yes. Still to be perfected. 8.21.1 The personal growth mechanism should especially focus on result assessment, don't focus too much on the process, it will waste too much time and energy.	9.20.1 Yes. The incentive mechanism is relatively simple. 9.21.1 It can provide individuals with guidance on obtaining professional qualification certificates, and provide certain financial subsidies.	1 0.20.1 Yes, creating a personal growth mechanism has a certain effect on the development of personal creativity. 10.21.1 At present, the school's personal growth mechanism is relatively complete.	10 people think that creating a personal growth mechanism can stimulate personal creativity, and 9 people think that the current school's personal growth mechanism is not perfect.	1 person thinks that the current school's personal growth mechanism is relatively complete.	Incentives	The school needs to further improve the personal growth mechanism, which can be considered from the aspects of scientific research, teaching, professional title, ability

Respondent 8	Respondent 9	Respondent 10	Coding round 1	Coding cycle 2	Categorizing (Keyword)	Evaluation
20. Do you think creating a personal growth mechanism can stimulate personal creativity?						
21. How do you think the school's personal growth mechanism should be improved?						
It is recommended to invite more experts with real talents and practical learning and knowledgeable vision to give lectures to employees better.		For example, the Faculty Development Center reminds new employees to formulate a personal three-year development plan. No suggestions yet.				improvement and career planning in combination with the actual situation of different positions

Appendix D

IOC Item Content Validity

Title: How to foster innovative thinking for office administration staff: A case of Guangxi Vocational &Technical College

Objective: Using the method of combining qualitative analysis and quantitative analysis, on how to cultivate innovative thinking of office management exploratory analysis, it is concluded that the Guangxi vocational and technical college office management personnel in the work environment, organizational culture, seminar (training), personal motivation, information technology, organizational guarantee, etc.

Student ID: 7640201476 Student Name: Zhu Maojing

Variables in a literature review	Questions	Expert 1 Dr. Guangbo Lin	Comment & Suggestion
Work environment	1. Do you think the work environment has a great influence on the formation of innovative thinking?	0	The content of the topic is not specific enough, and it needs to
	2. What kind of environment do you think an organization should provide to foster individual creativity?	1	

Variables in a literature review	Questions	Expert 1 Dr. Guangbo Lin	Comment & Suggestion
Organizational culture	3. What elements of organizational culture do you think affect employees' ability to innovate?	1	
	4. How do you think organizational culture affects employees' innovation ability?	1	
	5. Do you think complex or simple work encourages creative behavior more? Please explain.	1	
	6. Do you think the current school attaches great importance to innovation?	1	
	7. Can the mix of diversity in the executive department stimulate employee creativity? Please explain.	1	

Date of Collection 11th June 2022		Expert 4	
Variables in a literature review	Questions	Dr. Guangbo Lin	Comment & Suggestion
Seminar (Training)	8. What factors do you think affect the formation of innovative thinking and the application of problem-solving skills?	1	
	9. Do you think innovation seminar (training) can cultivate employees' innovative thinking and problem-solving skills?	1	
	10. What do you think are the barriers to communication in your present department?	1	
	11. Do you think that the establishment of trusting relationship between employees and the creation of a good organizational atmosphere will promote employee creativity?	1	
Personal motivation	12. Do you think there are any ways to promote the improvement of personal creativity?	1	
	13. How do you think the inner enthusiasm of employees should be stimulated to increase creativity?	1	
	14. Do you think high creativity of employees can improve job performance? Please explain.	1	
	15. Do you think personal expertise affects innovation?	1	

Date of Collection 11th June 2022		Expert 4	
Questions		Dr. Guangbo Lin	Comment & Suggestion
	16. Does the richer the professional knowledge, the stronger the innovation ability? Please explain.	1	
Information technology	17. Do you think the use of educational management information systems, such as office automation software, can increase innovation?	1	
	18. Do you think there is anything that can be improved about the existing office automation system in the school?	1	
Organizational guarantee	19. Do you think strong leadership in the executive branch increases innovation?	1	
	20. Do you think creating a personal growth mechanism can stimulate personal creativity?	1	
	21. How do you think the personal growth mechanism of schools should be improved?	1	

Approved and Endorsed:

林广波

() Contact Number:

Lecturer: --

GuangBo Lin   PHD of Business management

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BANGKOK UNIVERSITY

IOC Item Content Validity

Title: How to foster innovative thinking for office administration staff: A case of Guangxi Vocational&Technical College

Objective: Using the method of combining qualitative analysis and quantitative analysis, on how to cultivate innovative thinking of office management exploratory analysis, it is concluded that the Guangxi vocational and technical college office management personnel in the work environment, organizational culture, seminar (training), personal motivation, information technology, organizational guarantee, etc

Student ID: 7640201476   Student Name: ZHUMAOJING

Date of Collection 11th June 2022

Variables in a literature review	Questions	Expert 2 Dr. Xiaolong Huang	Comment & Suggestion
Work environment	1. Do you think the work environment has a great influence on the formation of innovative thinking?	1	
	2. What kind of environment do you think an organization should provide to foster individual creativity?	1	

Variables in a literature review	Questions	Expert 2 Dr. Xiaolong Huang	Comment & Suggestion
Organizational culture	3. What elements of organizational culture do you think affect employees' ability to innovate?	1	
	4. How do you think organizational culture affects employees' innovation ability?	1	
	5. Do you think complex or simple work encourages creative behavior more? Please explain.	1	
	6. Do you think the current school attaches great importance to innovation?	1	
	7. Can the mix of diversity in the executive department stimulate employee creativity? Please explain.	1	

Variables in a literature review	Questions	Expert 4 Dr. Xiaolong Huang	Comment & Suggestion
Seminar (Training)	8. What factors do you think affect the formation of innovative thinking and the application of problem-solving skills?	1	
	9. Do you think innovation seminar (training) can cultivate employees' innovative thinking and problem-solving skills?	1	
	10. What do you think are the barriers to communication in your present department?	1	
	11. Do you think that the establishment of trusting relationship between employees and the creation of a good organizational atmosphere will promote employee creativity?	1	
Personal motivation	12. Do you think there are any ways to promote the improvement of personal creativity?	1	
	13. How do you think the inner enthusiasm of employees should be stimulated to increase creativity?	1	
	14. Do you think high creativity of employees can improve job performance? Please explain.	1	

Variables in a literature review	Questions	Expert 4 Dr. Xiaolong Huang	Comment & Suggestion
	15. Do you think personal expertise affects innovation?	1	
	16. Does the richer the professional knowledge, the stronger the innovation ability? Please explain.	1	
Information technology	17. Do you think the use of educational management information systems, such as office automation software, can increase innovation?	1	
	18. Do you think there is anything that can be improved about the existing office automation system in the school?	1	
Organizational guarantee	19. Do you think strong leadership in the executive branch increases innovation?	1	
	20. Do you think creating a personal growth mechanism can stimulate personal creativity?	1	
	21. How do you think the personal growth mechanism of schools should be improved?	1	

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Contact Number:

Lecturer:--

IOC Item Content Validity

Title: How to foster innovative thinking for office administration staff: A case of Guangxi Vocational&Technical College

Objective: Using the method of combining qualitative analysis and quantitative analysis, on how to cultivate innovative thinking of office management exploratory analysis, it is concluded that the Guangxi vocational and technical college office management personnel in the work environment, organizational culture, seminar (training), personal motivation, information technology, organizational guarantee, etc.

Student ID: 7640201476 **Student Name: ZHUMAOJING**

Date of Collection 11th June 2022

Variables in a literature review	Questions	Expert 3 Dr. Lulu Zou	Comment & Suggestion
Work environment	1. Do you think the work environment has a great influence on the formation of innovative thinking?	1	
	2. What kind of environment do you think an organization should provide to foster individual creativity?	1	
Organizational culture	3. What elements of organizational culture do you think affect employees' ability to innovate?	1	
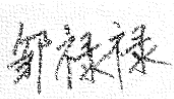
Variables in a literature review	Questions	Expert 3 Dr. Lulu Zou	Comment & Suggestion
Organizational culture	4. How do you think organizational culture affects employees' innovation ability?	1	
	5. Do you think complex or simple work encourages creative behavior more? Please explain.	1	
	6. Do you think the current school attaches great importance to innovation?	1	
	7. Can the mix of diversity in the executive department stimulate employee creativity? Please explain.	1	

Variables in a literature review	Questions	Expert 4 Dr. Lulu Zou	Comment & Suggestion
Seminar (Training)	8. What factors do you think affect the formation of innovative thinking and the application of problem-solving skills?	1	
	9. Do you think innovation seminar (training) can cultivate employees' innovative thinking and problem-solving skills?	1	
	10. What do you think are the barriers to communication in your present department?	1	

Variables in a literature review	Questions	Expert 4 Dr. Lulu Zou	Comment & Suggestion
Seminar (Training)	11. Do you think that the establishment of trusting relationship between employees and the creation of a good organizational atmosphere will promote employee creativity?	1	
Personal motivation	12. Do you think there are any ways to promote the improvement of personal creativity?	1	
	13. How do you think the inner enthusiasm of employees should be stimulated to increase creativity?	1	
	14. Do you think high creativity of employees can improve job performance? Please explain.	1	
	15. Do you think personal expertise affects innovation?	1	
	16. Does the richer the professional knowledge, the stronger the innovation ability? Please explain.	1	

Variables in a literature review	Questions	Expert 4 Dr. Lulu Zou	Comment & Suggestion
Information technology	17. Do you think the use of educational management information systems, such as office automation software, can increase innovation?	1	
	18. Do you think there is anything that can be improved about the existing office automation system in the school?	1	
Organizational guarantee	19. Do you think strong leadership in the executive branch increases innovation?	1	
	20. Do you think creating a personal growth mechanism can stimulate personal creativity?	1	
	21. How do you think the personal growth mechanism of schools should be improved?	1	

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Lecturer: ------------------------------------

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IOC Item Content Validity

Title: How to foster innovative thinking for office administration staff: A case of Guangxi Vocational&Technical College

Objective: Using the method of combining qualitative analysis and quantitative analysis, on how to cultivate innovative thinking of office management exploratory analysis, it is concluded that the Guangxi vocational and technical college office management personnel in the work environment, organizational culture, seminar (training), personal motivation, information technology, organizational guarantee, etc.

Student ID: 7640201476   Student Name: ZHUMAOJING

Date of Collection 11th June 2022

Variables in a literature review	Questions	Expert 4 Dr. Qiu xue Luo	Comment & Suggestion
Work environment	1. Do you think the work environment has a great influence on the formation of innovative thinking?	1	
	2. What kind of environment do you think an organization should provide to foster individual creativity?	1	

Variables in a literature review	Questions	Expert 4 Dr. Qiu xue Luo	Comment & Suggestion
Organizational culture	3. What elements of organizational culture do you think affect employees' ability to innovate?	0	Suggested: Do you think corporate culture has an impact on employees'
	4. How do you think organizational culture affects employees' innovation ability?	1	
	5. Do you think complex or simple work encourages creative behavior more? Please explain.	0	If you ask a question with or, it is not easy
	6. Do you think the current school attaches great importance to innovation?	1	
	7. Can the mix of diversity in the executive department stimulate employee creativity? Please explain.	1	
Seminar (Training)	8. What factors do you think affect the formation of innovative thinking and the application of problem-solving skills?	1	

Variables in a literature review	Questions	Expert 4 Dr. Qiu xue Luo	Comment & Suggestion
Seminar (Training)	9. Do you think innovation seminar (training) can cultivate employees' innovative thinking and problem-solving skills?	1	
	10. What do you think are the barriers to communication in your present department?	1	
	11. Do you think that the establishment of trusting relationship between employees and the creation of a good organizational atmosphere will promote employee creativity?	1	
Personal motivation	12. Do you think there are any ways to promote the improvement of personal creativity?	1	
	13. How do you think the inner enthusiasm of employees should be stimulated to increase creativity?	1	
	14. Do you think high creativity of employees can improve job performance? Please explain.	1	
	15. Do you think personal expertise affects innovation?	1	

Variables in a literature review	Questions	Expert 4 Dr. Qiu xue Luo	Comment & Suggestion
Personal motivation	16. Does the richer the professional knowledge, the stronger the innovation ability? Please explain.	1	
Information technology	17. Do you think the use of educational management information systems, such as office automation software, can increase innovation?	1	
	18. Do you think there is anything that can be improved about the existing office automation system in the school?	1	
Organizational guarantee	19. Do you think strong leadership in the executive branch increases innovation?	1	
	20. Do you think creating a personal growth mechanism can stimulate personal creativity?	1	
	21. How do you think the personal growth mechanism of schools should be improved?	1	

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Lecturer:

IOC score table

Questions	Expert 1 Dr.Guangbo Lin	Expert 2 Dr. Xiaolong Huang	Expert 3 Dr. Lulu Zou	Expert 4 Dr. Qiuxue Luo	IOC	Comment
1. Do you think the work environment has a great influence on the formation of innovative thinking?	0	1	1	1	0.75	The content of the topic is not specific enough, and it needs to start from the content of the innovative behavior of administrative staff.
2. What kind of environment do you think an organization should provide to foster individual creativity?	1	1	1	1	1	
3. What elements of organizational culture do you think affect employees' ability to innovate?	0	1	1	1	0.75	Others may not know what elements are involved in corporate culture. Do you think corporate culture has an impact on employees' creativity?

Questions	Expert 1	Expert 2	Expert 3	Expert 4	IOC	Comment
	Dr.Guangbo Lin	Dr. Xiaolong Huang	Dr. Lulu Zou	Dr. Qiuxue Luo		
4. How do you think organizational culture affects employees' innovation ability?	1	1	1	1	1	
5. Do you think complex or simple work encourages creative behavior more? Please explain.	1	1	1	0	0.75	If you ask a question with or, it is not easy to answer.
6. Do you think the current school attaches great importance to innovation?	1	1	1	1	1	
7. Can the mix of diversity in the executive department stimulate employee creativity? Please explain.	1	1	1	1	1	

Questions	Expert 1 Dr.Guangbo Lin	Expert 2 Dr. Xiaolong Huang	Expert 3 Dr. Lulu Zou	Expert 4 Dr. Qiuxue Luo	IOC	Comment
8. What factors do you think affect the formation of innovative thinking and the application of problem-solving skills?	1	1	1	1	1	
9. Do you think innovation seminar (training) can cultivate employees' innovative thinking and problem-solving skills?	1	1	1	1	1	
10. What do you think are the barriers to communication in your present department?	1	1	1	1	1	

Questions	Expert 1 Dr.Guangbo Lin	Expert 2 Dr. Xiaolong Huang	Expert 3 Dr. Lulu Zou	Expert 4 Dr. Qiuxue Luo	IOC	Comment
11. Do you think that the establishment of trusting relationship between employees and the creation of a good organizational atmosphere will promote employee creativity?	1	1	1	1	1	
12. Do you think there are any ways to promote the improvement of personal creativity?	1	1	1	1	1	
13. How do you think the inner enthusiasm of employees should be stimulated to increase creativity?	1	1	1	1	1	
14. Do you think high creativity of employees can improve job performance? Please explain.	1	1	1	1	1	

Questions	Expert 1 Dr.Guangbo Lin	Expert 2 Dr. Xiaolong Huang	Expert 3 Dr. Lulu Zou	Expert 4 Dr. Qiuxue Luo	IOC	Comment
15. Do you think personal expertise affects innovation?	1	1	1	1	1	
16. Does the richer the professional knowledge, the stronger the innovation ability? Please explain.	1	1	1	1	1	
17. Do you think the use of educational management information systems, such as office automation software, can increase innovation?	1	1	1	1	1	
18. Do you think there is anything that can be improved about the existing office automation system in the school?	1	1	1	1	1	

Questions	Expert 1 Dr.Guangbo Lin	Expert 2 Dr. Xiaolong Huang	Expert 3 Dr. Lulu Zou	Expert 4 Dr. Qiuxue Luo	IOC	Comment
19. Do you think strong leadership in the executive branch increases innovation?	1	1	1	1	1	
20. Do you think creating a personal growth mechanism can stimulate personal creativity?	1	1	1	1	1	
21. How do you think the personal growth mechanism of schools should be improved?	1	1	1	1	1	

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