

THE DEVELOPMENT OF AN INSTRUCTIONAL MODEL BASED ON  
ROGERS' THEORY TO ENHANCE THE ADVERSITY QUOTIENT FOR  
GUANGXI INTERNATIONAL BUSINESS VOCATIONAL COLLEGE

SUN QIN

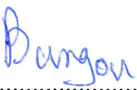
A thesis submitted in partial fulfillment of the requirements for  
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Academic Year 2023

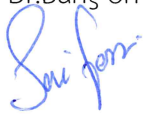
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Thesis Title            The Development of an Instructional Model Based on Rogers' Theory to Enhance the Adversity Quotient for Guangxi International Business Vocational College

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<b>Academic Year</b>	<b>2023</b>

### **ABSTRACT**

This research aimed to: 1) study the current situation of adversity quotient development, 2) develop an instructional model based on Rogers' theory, 3) compare students' adversity quotient before and after using the instructional model based on Rogers' theory. The sample group was 33 freshmen from infant care services and management major of Guangxi International Business Vocational College. The research tools were 1) a questionnaire about the current situation and existing problems of the adversity quotient of college students, 2) an interview form about the current situation and existing problems about the adversity quotient of college students, 3) lesson plans, 4) Adversity Quotient Scale, 5) observation form about student behavior, 6) interview form about opinions on teaching. This study was conducted in three steps: a study of a study about the current situation of adversity quotient development, the development of the instructional model, and an experimental and improvement of the instructional model. Data were statistically analyzed, qualitative data were analyzed through content analysis, and quantitative data were analyzed through descriptive statistics, frequency, percentage, means, and standard deviation, and the different scores of mathematics achievement before and after using the instructional model were analyzed through dependent t-test for paired samples.

The results of the study show that 1) the current situation and existing problems of the adversity quotient of college students have four aspects: students, teachers, learning process, and environment. 2) the instructional model consisted of four components: Principle, Objective, Learning Process, and Result. The learning

process consisted of 5 steps: (1) emotionally driven problem definition (2) problem discussion (3) planning and decision making (4) action (5) evaluating and feedback. 3) After the implementation of the instructional model based on Rogers' theory, college students' adversity quotient was significantly higher than the level before class, and it was statistically significant at the 0.01 level.

In conclusion, the findings of this study highlight the effectiveness of the instructional model based on Rogers' theory in enhancing the adversity quotient of college students. The significant improvement observed in students' AQ scores suggests that the structured approach provided by the instructional model positively impacts students' ability to navigate challenges and adversities. The identified components of the instructional model, including its principles, objectives, and learning processes, offer valuable insights for educators and practitioners seeking to promote resilience and adaptability among students. Overall, the results support the integration of Rogers' theory into instructional practices aimed at fostering students' adversity quotient and preparing them for the complexities of real-world situations.

**Keywords:** Instructional Model, Rogers' Theory, Adversity Quotient

## Acknowledgment

During my doctoral journey, I experienced numerous ups and downs, witnessing significant changes in my life. This has been the most memorable journey of my life, where time passed by as flowers bloomed and withered. Now, as my doctoral thesis bears fruit, I am overwhelmed with gratitude towards all those who have aided me along the way.

First and foremost, I extend my deepest gratitude to my Major Advisor, Prof. Dr. Bung-on, who provided me with unwavering support and warmth during the toughest times of my life. Your constant encouragement propelled me forward, urging me to persevere in completing my academic pursuits. Whenever my thesis encountered obstacles, you generously imparted your wisdom on overcoming challenges and navigating through the intricacies of academic research. I am also indebted to Prof. Dr. Saifon for offering invaluable constructive feedback on my thesis and facilitating connections with experts who provided guidance. I extend my thanks to Teacher Dr. Phenporn for her invaluable guidance on data analysis and manuscript refinement. Special appreciation goes to Prof. Dr. Zhang Shuyue for her invaluable guidance on data collection, analysis methods, and invaluable insights into selecting my thesis topic, as well as her guidance on doctoral thesis writing techniques.

I am grateful to the experts, scholars, and students who supported my thesis, contributing significantly to its advancement. To my comrades who stood by my side, your resilience and shared knowledge have illuminated my path forward. I would also like to extend special thanks to my classmates Tan Shuyin, Zhang Li, Lin Wei, Tang Binbin, Chen Yanru, Xie Peihao, and Zhou Chaozheng. They consistently encouraged me to study diligently and stay focused on my academic pursuits. Heartfelt gratitude to my family for being my pillar of strength, providing unwavering confidence and love that allowed me to focus wholeheartedly on my studies. The progress I've made fills me with joy and pride, and I aspire to impart hope to my students, guiding them through adversity with the knowledge I've acquired.

This journey has been arduous yet fulfilling, and I am profoundly grateful for the support and guidance I've received from each one of you.

Sun Qin

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# Chapter 1

## Introduction

### Rationale

Education in the 21st century aims to improve the education and quality of life of the population in each country by setting aspirations to lead to a better life for everyone to have a chance to lifelong learning. Education plays a role in the development of people and society and is the key to helping solve various conflicts that arise in the world. Every 21st-century skills implementation requires developing key skills, academic subject knowledge, and understanding among all students. Health literacy is an important one. It can help us to understand preventive physical and mental health measures, including proper diet, nutrition, exercise, risk avoidance, and stress reduction.

However, many college students are under great ideological pressure, such as pressure to study, lack of independence, pressure to adapt to the environment, employment pressure, etc. In addition, college students are young, lack life experience, and have a poor ability to resist frustration and adjust. In the face of difficulties and adversities, it is particularly easy to fall into the mire of negativity and be unable to extricate themselves. More and more college students can't bear the problems of poor interpersonal relationships, loneliness, poverty, employment, etc., and unhealthy psychological phenomena such as anxiety, insomnia, depression, and fear. Some college students even hurt themselves, have mental breakdowns, and commit suicide. According to (World Health Statistics 2023 – Monitoring Health for the SDGs, 2023), suicide was the third leading cause of death among girls and young women aged 15–29 years and fourth among boys and young men in the same age group in 2019. From Report on National Mental Health Development in China (2021-2022): Among college students, 13.28 % were at risk of mild depression, and 3.30 % were at risk of major depression. At the same time, 32.53% of students had mild anxiety risk, 3.47% had moderate anxiety risk, and 1.43% had severe anxiety risk. Ministry of Education of the People's Republic of China (2011) issued the "Basic Requirements for the Teaching of Mental Health Education Courses for Students in General Institutions of Higher Education," specifically putting forward requirements for

the main teaching contents such as "College Students' Stress Management and Setback Coping." Through teaching, students can correctly understand stress and setbacks and understand college students. The main source of stress and setbacks: understand the meaning of stress and setbacks in life and learn to manage stress and deal with setbacks properly. The State Council of the People's Republic of China (2022) stated in its reply to the "Proposal on Strengthening Frustration Education for College Students" that strengthening mental health education for college students, including frustration education, is an important part of strengthening and improving college students' ideological and political education in the new situation. Content is an important way and means to promote the all-round development of college students.

People with a high adversity quotient are more resilient to stress. Adversity Quotient is when people face adversity or setbacks; different people will have different reactions to adversity or setbacks, which is adversity quotient, that is, the ability to withstand pressure in the face of adversity and the ability to get rid of and solve difficulties (Stoltz, 1997). The adversity quotient can help college students overcome setbacks and difficulties and form a correct world outlook, values, and outlook on life. Enhancing students' adversity quotient can improve students' coping methods and coping skills, relieve self-pressure, improve self-quality, accumulate life experience, and cultivate anti-setback ability. In the face of adversity and stress, students can avoid sinking into a negative quagmire they can't escape. In 2000, Stoltz published his book *Adversity Quotient @ Work* (2000), in this book, the author analyzes the science of adversity quotient and provides effective tools and models to guide people how to train high-adversity quotient climbers through training to help people cope with difficulties and challenges in work and life.

Based on summarizing the clinical psychology experience, Rogers proposed the theory of "non-guided customer-centered therapy" and the principle of nondirective teaching. A non-directive approach that "trends away from guiding and directing the client" and places "stress upon catharsis and insight" (Rogers, 1946 b, p. 415). Rogers argues that education should be student-centered and students are the main body of education. Students are not passive recipients and indoctrinated objects of knowledge. In the learning process, students carry out learning activities according to their interests and hobbies and actively choose "meaningful" learning

content according to their goals. The teacher's main responsibility in the teaching process is to create a "free, comfortable, sincere, accepting and understanding" learning atmosphere to guide students to self-learning and self-realization.

As a mental health teacher for freshmen at Guangxi International Business Vocational College, the researcher found that freshmen have mental health confusion in many aspects based on eight years of experience in psychological teaching and psychological counseling. Some students with serious psychological problems often do not know how to respond effectively when faced with adversity. Therefore, researchers believe that improving students' adversity quotient is of great significance to students' life development. The teaching method under the guidance of Rogers' theory can cultivate students' interest in a wide range of activities, form an optimistic attitude, help them grow healthily and happily, and help form a good way of thinking, forming, and behaving in the face of adversity. Therefore, according to the policy, this study designed a new teaching model based on Rogers' theory to improve the adversity quotient of college students, which is of great benefit to improve the health level of students.

### **Research Questions**

1. What is the current situation of adversity quotient development at Guangxi International Business Vocational College development?
2. What are the elements of the instructional model based on Rogers' theory for the freshmen at Guangxi International Business Vocational College? How to develop an instructional model of adversity quotient based on Rogers' theory?
3. What are the results of implementing an instructional model based on Rogers' theory for the freshmen at Guangxi International Business Vocational College?

### **Research Objectives**

1. To study the current situation of adversity quotient development at Guangxi International Business Vocational College development.
2. To develop an instructional model based on Rogers' theory.
3. To compare students' adversity quotient before and after using the instructional model based on Rogers' theory.

## Research Hypothesis

The students had a higher adversity quotient after using the instructional model based on Rogers' theory.

## Scope of the Research

### Population and the Sample Group

#### Population

104 freshmen of Infant and childcare services and management major at Guangxi International Business Vocational College

#### The Sample Group

The cluster random sampling method selected 33 freshmen from Infant and childcare services and management major at Guangxi International Business Vocational College.

### The Variable

#### Independent Variables

The instructional model based on Rogers' theory

#### Dependent Variables

Students' adversity quotient

### Contents

This study aimed to develop an instructional model based on Rogers' theory, and it was used to enhance the adversity quotient in the mental health education course for first-grade students. This course is 20 hours, 300 minutes per week. The study of this course is divided into the following three units.

Learning Unit 1: Test anxiety. It includes: knowing the emotional reaction of test anxiety, understanding the causes of test anxiety, and mastering the coping methods of test anxiety. (450 minutes)

Learning Unit 2: Friendship conflict. It includes understanding the emotional response to friendship conflict, understanding the causes of friendship conflict, and mastering ways to resolve friendship conflict. (450 minutes)

Learning Unit 3: Loneliness. It includes understanding the emotional responses associated with loneliness, understanding the causes of loneliness, and mastering ways to cope with loneliness. (300 minutes)

### **Timeframe**

1. In September to November 2023, complete the opening defense of the first three chapters of the thesis.

2. In November-December 2023, the experimental tool design and expert evaluation were conducted.

3. In December 2023 - February 2024, the experimental studies were conducted.

4. In February - March 2024, the data analysis and writing of the paper was completed.

5. In April 2024, the researcher completed the final defense of the thesis.

### **Advantages**

1. For students, this study can have an adversity quotient level. The adversity quotient helps students feel more in control, mitigate the negative effects of hardship, and know what they can do to get through it. Students participate in the whole class, plan, think independently, and explore themselves. Students take the initiative to learn and communicate with each other. It greatly improves students' learning interests and abilities, stimulates learning enthusiasm, and improves their mental health.

2. For teachers, the developed instructional model based on Rogers' theory can be used as a reference and guide for other teachers to enhance students' adversity quotient. In addition, Teachers can be liberated from traditional teaching knowledge. They can focus on students' learning methods and skills, as well as their feelings in the learning process. Teachers become supporters and helpers of students, which can reduce the pressure on teachers and students.

3. For schools, the developed Instructional model improves students' adversity quotient and mental health. The effective application of this model will improve the teaching quality of mental health education in schools and even improve the social reputation of schools.

## Definitions of Terms

### 1. Adversity quotient

The adversity quotient refers to a student's ability to face setbacks and rise above difficulties, including control, ownership, reach, and endurance. Control: pertains to the degree of influence one has over the encountered challenges; Origin and ownership: address the issue of where the problem stems from and how much acknowledgment is given to its source; Reach: considers the extent to which the difficulties will impact other areas of life; Endurance: deals with the duration of these challenges (Stoltz, 1997). Used in this article was accepted by Chinese universities, made by Li and Chen (2008), according to Stoltz (1997) compiled Adversity Quotient Scale to discuss revision of the adversity table. The adversity table consists of 60 items in 30 situations.

2. The development of an instructional model refers to the process of developing the instructional model. It includes four stages: 1) studying the instructional model development process 2) determining the instructional model components 3) drafting the details of the instructional model and 4) verifying the details of the instructional model.

### 3. The instructional model based on Rogers' theory

The instructional model based on Rogers' theory refers to a systematic process based on Rogers's Theory that focuses on learning with non-direct guidance ideas based on the attitude of trust, empathy, understanding, and holding. It includes four elements: principal objectives process and results, It is designed to improve the Adversity quotient.

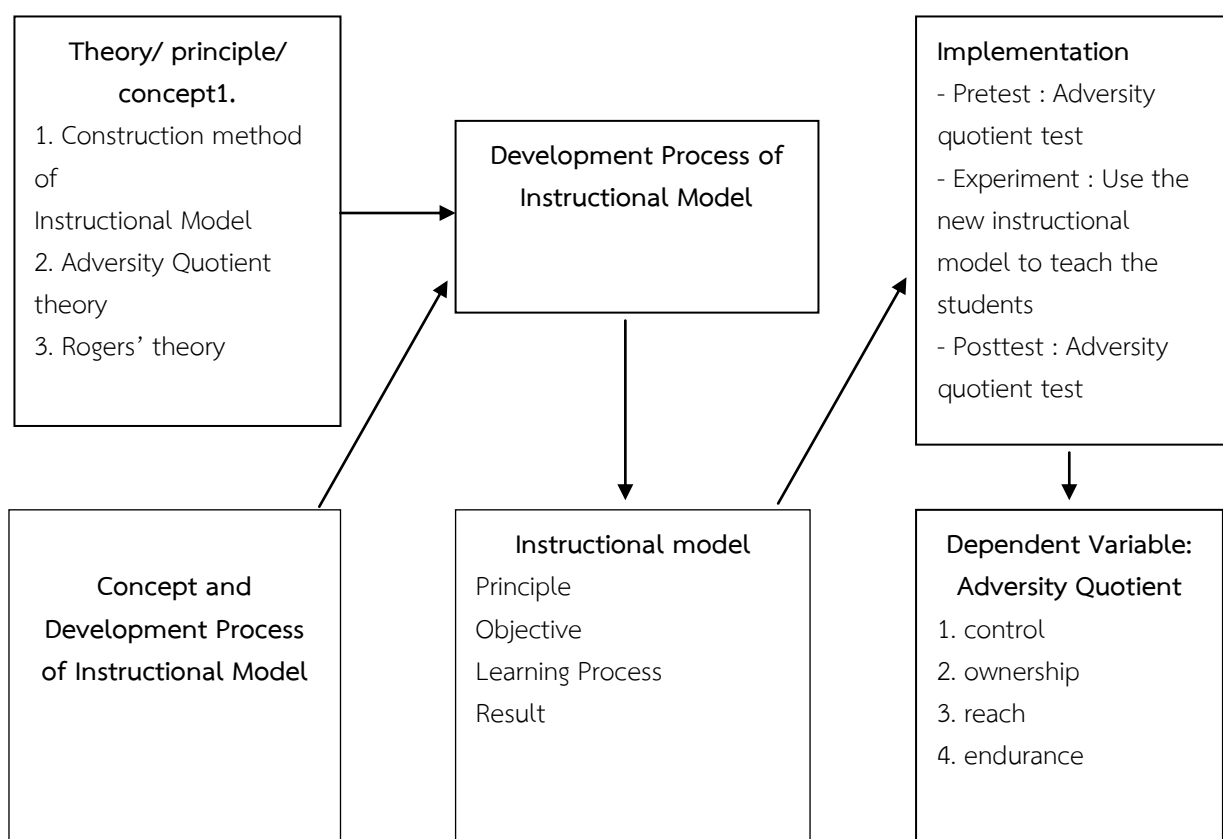
### 4. Student

students refer to the students at Class 1 of the Infant and childcare services and management major of Guangxi International Business Vocational College, the first semester of the first academic year. The teacher is a psychology major lecturer who has worked at Guangxi International Business Vocational College more than five years.

## Research Framework

The concepts used in this study mainly include Guidelines for Mental Health Education for Students in Colleges and Universities Ministry of Education, PRC, 2018), Adversity Quotient (Stoltz, 1999) ,and Rogers' theory (Rogers, 1961).

The instructional model developed in this research contains four elements - Principle, Objective, Learning Process, and Result. Use the One Group Pretest-Posttest Design instructional model to improve the adversity quotient.



Figures 1.1 Research Framework



## Chapter 2

### Literature Review

In the study of the development of an instructional model based on Rogers' theory to enhance the adversity quotient for the mental health education course for the first-grade students at Guangxi International Business Vocational College, the researcher studied the documents concerning the following:

1. Adversity quotient (AQ)
2. Rogers' Theory
3. Instructional model
4. Mental health education course
5. Related Research

#### **Adversity Quotient (AQ)**

##### **Adversity Quotient Definition**

An important factor influencing success, in addition to intelligence quotient (IQ) and emotional quotient (EQ), is the adversity quotient (AQ) (Stoltz, 1997). According to Juwita et al. (2020), AQ represents an individual's capacity to confront and conquer obstacles or challenges. Pong and Lam (2023) believed that the adversity quotient pertains to the capability to endure and thrive amidst life's challenges and difficulties.

The Adversity Quotient, as a novel conceptual framework, redefines success by integrating extensive research findings. It evaluates individuals' responses to adversity, highlighting the significance of subconscious patterns in shaping life outcomes. Through measurement and intervention, it offers science-based tools to enhance personal and professional efficacy in navigating challenges.

##### **The Adversity Quotient's three scientific building blocks**

Stoltz (1997) believed that the Adversity Quotient can be delineated into three Building Blocks:

Building Block 1: Cognitive Psychology, encompassing attributional theory, explanatory style, optimism, self-efficacy, and locus of control, which collectively influence efficiency, performance, and individual success.

Building Block 2: Psychoneuroimmunology, wherein people's thoughts and emotions are governed by brain chemicals that also regulate the body's defenses. Thus, one's response to adversity (AQ) directly impacts immune functions, recovery from surgery, susceptibility to life-threatening diseases, and can even precipitate depression.

Building Block 3: The Science of the Brain, highlighting the brain's propensity to form habits. This implies that an individual's habitual response to adversity can be instantly altered and replaced, leading to the withering of old habits and the flourishing of new ones.

### **Adversity Quotient development**

Used in this article was accepted by Chinese universities, made by Li and Chen (2008), according to Stoltz (1997) compiled Adversity Quotient Scale to discuss revision of the adversity table. The adversity table consists of 60 items in 30 situations.

Stoltz (1997) points out that the adversity quotient has the following effects:

1. The adversity quotient tests the ability to withstand and conquer adversity.
2. The adversity quotient anticipates individuals' resilience in overcoming challenges versus succumbing to them.
3. The adversity quotient forecasts individuals' likelihood of surpassing expectations or falling short.
4. The adversity quotient forecasts individuals' tendencies towards perseverance or surrender.
5. The adversity quotient is a scientifically based tool that can be used to improve responses to adversity and enhance overall professional effectiveness.
6. The Adversity quotient is a new concept of success that tells you how to reach your potential.

By assessing the adversity quotient, we can predict an individual's performance across various domains. For instance, individuals with high adversity quotient often demonstrate higher learning or work efficiency, and their personalities tend to lean towards positive traits or possess greater psychological capital, resulting in higher levels of psychological well-being (MAMINO, 2021). They are ability to continuously improve, attitude, permanence, and response to change.

There are four dimensions of the adversity quotient, namely CO2RE (Stoltz, 1997)

Control: pertains to the degree of influence one has over the encountered challenges;

Origin and ownership: address the issue of where the problem stems from and how much acknowledgment is given to its source;

Reach: considers the extent to which the difficulties will impact other areas of life;

**Endurance: deals with the duration of these challenges.**

The outcomes of this evaluation will categorize individuals into one of three groups: quitters, campers, or climbers. Quitters are those who cease their efforts, lacking the desire to confront challenges or seize opportunities. Campers, on the other hand, accept and confront problems but are hesitant to take risks and may readily give up when faced with obstacles. In contrast, climbers are courageous individuals who willingly face the risks associated with challenges. They focus not on their abilities or skills but on striving to achieve their goals in problem-solving endeavors. (Stoltz, 1997).

**The three pillars constituting the inverse quotient are:**

1. Cognitive Psychology: A key theory suggests that individuals have a fundamental need to "control their destiny." Through the exploration of concepts like learned helplessness, attribution theory, attribution style, optimism, resilience, and tendencies towards internal and external control, it becomes evident that people's perception of control over their lives and their attributions to adversity greatly influence and can effectively predict success. For instance, individuals with low adversity quotient tend to view adversity as enduring, pervasive, internal, and uncontrollable, often experiencing setbacks. Conversely, those with a high adversity quotient perceive adversity as transient, localized, external, and controllable, leading to successful outcomes. How individuals respond to adversity significantly impacts their effectiveness, performance, and success. Moreover, our patterns of coping with adversity are often subconscious and deeply ingrained, persisting throughout our lifetime unless consciously altered. Furthermore, mental health, physical health, vitality, happiness, and joy serve as predictors of adversity quotient.

2. Emerging Health Theories: Numerous studies in the field of psychoneuroimmunology have highlighted the direct relationship between one's response to adversity and both physical and mental health. A sense of mastery is crucial for fostering healthy longevity, as how individuals cope with adversity (adversity quotient) influences immune function, postoperative recovery, and mortality rates. Inadequate coping mechanisms for adversity can also predispose individuals to depression.

3. Brain science: Overcoming detrimental habits, such as those associated with low adversity quotient, necessitates the establishment of new neural pathways in the conscious regions of the brain. Pioneering research in neurophysiology has demonstrated the brain's capacity to shape habits, with ingrained habits residing in subconscious areas. These subconscious habits, including adversity quotient, can be immediately altered, paving the way for the creation of new habits that strengthen over time.

**The presentation method of adversity quotient:**

1. A set of new knowledge conceptual frameworks to understand and enhance various success factors.
2. A range of valid measures to assess how people respond to adversity.
3. A scientifically based tool for improving how people cope with adversity, ultimately improving personal and professional effectiveness across the board.

The Adversity Quotient Scale can affect the following factors: resilience, performance, productivity, well-being, meaning in life, vitality, problem-solving, innovation, insight, talent, goal achievement, health, memory, promotion, wealth, achievement, ambition, level of effort, relationships, pace, mindset, and quality of life. In short, adversity comprehension affects the above factors. It can strengthen and enrich them, resulting in happier, more successful, better competitiveness, performance, and longevity for you and your team, family, and personal career and success. (Stoltz, 1997)

Research adversity quotient in the field of education focused a lot on students. Previous studies have reported the effect of adversity quotients on various aspects of human life. For instance, the effect of adversity quotient on Mathematics learning achievement (Amir et al., 2021; Anggraini & Mahmudi, 2021); Juwita & Usodo,

2020; Darmawan et al., 2019; Hastuti, 2018), student performance, student learning autonomy and student achievement (Safi'i et al., 2021).

Ismawati & Andriyani (2022) used 70 students to research the relationship between self-efficacy and adversity quotient. It indicated a significant positive correlation between self-efficacy and adversity quotient. The higher the self-efficacy, the higher the adversity quotient. On the other hand, lower self-efficacy lowers the adversity quotient.

“DEVELOPMENT OF NON-FORMAL EDUCATION ACTIVITIES BASED ON NEO-HUMANIST CONCEPTS AND COLLABORATIVE LEARNING TO DEVELOP ADVERSITY QUOTIENT OF STUDENTS IN PRIVATE UNIVERSITIES,” a study carried out by (Nimitniwat, 2011). The study aimed to develop a non-formal education activity model based on Neo-humanist concepts and collaborative learning to enhance the AQ of students in private universities. Their research was done in a quasi-experimental research approach consisting of a non-randomized control group with a pretest/posttest design, and the sample group was 40 freshmen. The outcomes of this study of the test confirmed three hypotheses: 1) the experimental group received significantly greater AQ scores than the control group at .01 and improved its AQ in all aspects: endurance, origin and ownership, reach, and control; 2) at the end of the experiment, the test group had AQ scores significantly higher than before experiment at .01 ; 3) regarding the AQ learning achievement, the test group improved significantly its learning achievement scores after the experiment at .01. In this study, the Adversity quotient refers to people's ability to face setbacks and rise above difficulties.

In their study published in *Frontiers in Psychology*, Zhao and Sang (2023) investigated the influence of emotional quotient (EQ) and adversity quotient (AQ) on individuals' objective and subjective career success. They surveyed 256 Chinese adults and assessed trait EQ and AQ through various measurements. The results indicated that certain aspects of EQ, such as the regulation of emotion, were positively associated with affective commitment, a component of organizational commitment. Additionally, resilience and grit, dimensions of AQ, showed varying effects on different aspects of organizational commitment and job position. Specifically, acceptance of self and life (resilience) was found to positively predict job position. These findings provide insights into the role of EQ and AQ in career

success, benefiting both organizational productivity and individual career advancement strategies.

Based on a grounded theory approach and informed by the concept of adversity quotient (AQ), Menzies et al. (2024) examined the entrepreneurial development of 18 Australian Indigenous female entrepreneurs (AIFE) amidst adversity. Their findings highlight that AIFEs encounter various adversities related to their gender and ethnic background. The study emphasizes the role of AQ in enabling Indigenous entrepreneurs to navigate challenges and establish businesses by leveraging contingencies. Successful business outcomes are attributed to AIFEs' resilience, persistence, and proactive approach to managing adversities.

### **Rogers' Theory**

According to the clinical experience of psychological counseling, Rogers & Freiberg (1994) humanistic education thought in the process of education and teaching, and people-oriented education exists in the process of education goal, education idea, education content, education means, education evaluation, and so on. People are endowed with the potential of learning and can consciously explore the unknown world towards their own goals. Education should conform to this nature and serve the realization of human individuality and freedom. Rogers' humanistic education aims at cultivating a "complete man" and "self-actualized man". Rogers believes that all living things have a specific "intrinsic tendency," that is, toward the "actualization tendency" of "full functioning." The biological organism of the world has a basic tendency and effort to maintain and develop the "self-actualization" of experience. Rogers' humanistic education aims at cultivating a "complete man" and "self-actualized man". Rogers believes that all living things have a certain "intrinsic tendency," that is, toward the "actualization tendency" of "full functioning." The biological organism of the world has a basic tendency and effort to maintain and develop the "self-actualization" of experience. Rogers' humanistic teaching view is "non-instructional teaching." Based on summarizing the experience of clinical psychology, Rogers proposed the theory of "non-guided customer-centered therapy" and The concept of "non-pedagogical teaching" is encompassed by several principles: (1) Encourage inspiration and induction, allow students to learn spontaneously, avoid direct instruction, and cultivate intrinsic motivation. (2) Teach

students following their aptitude, emphasizing teaching by their aptitude. (3) Actively guide learning, without setting restrictions, and strive to be subtle. (4) Cultivate situational awareness and create a good learning environment. (5) Enhance students' self-evaluation and self-management abilities.

Rogers's view of humanistic education advocates being "student-centered" and creating a positive atmosphere. Drawing on the principles of client-centered therapy, Rogers argued that education should prioritize the needs and autonomy of students, who are active participants in knowledge rather than passive recipients. In this model, students conduct learning activities based on their interests and preferences and actively choose meaningful content that meets their goals. The primary role of teachers is to create an environment of "freedom, support, sincerity, acceptance, and understanding" to guide students to learn independently and realize themselves.

Learning as a holistic process entails acquiring knowledge and skills that encompass cognitive, emotional, and intuitive dimensions. It involves a comprehensive understanding and integration of these different facets of learning. (Rogers, 1995).

Educators cultivate inclusive learning environments conducive to fostering the cognitive and creative development of youth. They uphold the value of life and equip students with critical decision-making skills, effective communication, and negotiation abilities.

Central to a teacher's role is the cultivation of authenticity or genuineness, which serves as the cornerstone for establishing meaningful rapport and communication with students. By fostering accessible channels of interaction and relationships, educators optimize the efficacy of educational processes.

Facilitating student growth and learning necessitates the provision of a secure and nurturing environment, characterized by a genuine appreciation for each student's intrinsic worth and dignity. This foundational approach propels students towards self-discovery, fostering the cultivation of self-esteem and autonomy in their educational journey.

Rogers' theoretical framework informs pedagogical practices aimed at cultivating a classroom climate grounded in trust, which in turn nurtures curiosity and the innate drive for learning. By nurturing students' self-esteem and confidence,

educators empower them to appreciate their worth, thereby unlocking the inherent joy of intellectual and emotional exploration, ultimately instilling a lifelong passion for learning.

Teachers promoting students' freedom to learn should have the following qualities and attitudes: (1) Realness and genuineness. Teachers are entering into a relationship with students by presenting a real person. (2) Prizing, Acceptance, Trust. Prizing involves valuing students—their emotions, opinions, and uniqueness. Acceptance means embracing everyone as worthy in their own right. Trust is fundamental—a belief in the inherent trustworthiness of the other person. A teacher can accept their student's imperfections and diverse emotions, fostering an environment of growth and potential. (3) Empathic Understanding. Enhanced learning outcomes occur when teachers empathize with students, gaining insight into their perspectives and sensitively grasping how they perceive the educational process. This ability to adopt the student's viewpoint fosters deeper understanding and meaningful learning experiences (Rogers, 1995).

This study argues that Rogers's Theory means that in a student-centered teaching environment, teachers promote students' learning with non-direct guidance ideas based on the attitude of trust, empathy, understanding, and holding. What is more important is to promote students to become excellent talents with sound personalities and self-development.

### **Instructional model**

Joyce et al. (2015) indicated Outstanding teaching involves utilizing a diverse array of instructional models, each suited for specific objectives, which collectively contribute to creating an optimal learning environment for students. Teaching is not a singular approach; rather, it encompasses various methods tailored to different students and disciplines, addressing a range of standards necessitating corresponding teaching strategies. Teachers play a pivotal role in equipping students with lifelong learning skills by employing teaching methods that instill these skills.

In education, various models aid students in enhancing their critical thinking abilities, improving information organization, and boosting self-assurance. Significant advancements have contributed to the improvement of teaching methodologies. Firstly, ongoing research on existing models and the creation of new ones has led to



refinements that enhance their effectiveness. Secondly, the integration of multiple models into curricula has yielded powerful educational tools.

The knowledge and skills students acquire today have profound long-term implications. Teaching children to read fosters a lifelong passion for reading. Teaching collaboration cultivates engaged citizens in our democracy. Teaching science nurtures inquiry skills and habits that empower students to educate themselves and tackle present and future challenges.

Andrews & Goodson (1991) examined 40 instructional design models from various sources. The 40 models were categorized based on their most pertinent characteristics, and discussions were held regarding their purposes and applications. The writers also offered an explanation for the existence of numerous models. It was concluded that educators must exercise caution in selecting which model to follow when designing instruction, considering the varying levels of model quality. Some instructional design models explicitly incorporate specific constructs related to effective instruction and learning, lending credibility to the term design. These models serve various purposes, including enhancing learning and instruction, improving instructional design and development management, enhancing evaluation processes, and testing or refining learning or instructional theory.

Therefore, this study believes the teaching model refers to guiding teachers to carry out their teaching and students' learning through a fixed teaching sequence, clear teaching purpose, teaching content, and teaching method.

### **Personal models of teaching**

Personal models of teaching aim to promote excellent mental and emotional well-being in both educators and students while prioritizing education that aligns with individuals' needs and aspirations. These models emphasize nurturing self-confidence, fostering a realistic sense of self, and cultivating empathetic responses towards others, thereby encouraging qualitative thinking outcomes such as creativity and personal expression. Additionally, these models assert that learners who are more self-actualized and affirmatively developed exhibit heightened learning capacities, contributing to increased academic achievement by attending to the psychological well-being of learners.

A fascinating review by Cornelius-White (2007) tracked 50 years of study. Effective implementation of personal teaching models has a positive impact on

various aspects of learning. This includes cognitive outcomes, which typically involve substantial learning, affective outcomes characterized by improved feelings of well-being and enhanced self-concepts, and behavioral outcomes that often manifest as students' increased ability to take ownership of their learning and development. The discussion also offers an insightful exploration of nondirective education, elucidating its origins and its effects on learners.

Rigeluth et al. (2017) believe the concept of personalized instruction involves several key components aimed at tailoring the learning experience to individual needs and preferences. Firstly, personalized goals, encompassing both long-term life aspirations and short-term learning objectives, are essential for fostering intrinsic motivation and ownership of learning. Secondly, the task environment should be personalized, incorporating customized task selection and decisions about collaboration, such as choosing teammates, to enhance engagement and effectiveness. Additionally, personalized scaffolding involves adjusting the nature and extent of coaching and instruction to meet the learner's unique requirements, facilitating optimal skill development, and understanding. Furthermore, personalized assessment requires tailoring the choice of assessor and assessment format to ensure fair and accurate evaluation of learning outcomes. Personalized reflection prompts learners to contemplate both the process and outcome of their tasks by their unique learning styles and preferences. This approach fosters deeper comprehension and enhances the development of metacognitive skills. In summary, personalized instruction empowers learners to take ownership of their learning journey and maximize their potential for growth and success.

#### **Non-directive teaching model**

The nondirective instructional model, pioneered by Rogers (1961) and proponents of nondirective counseling, extends therapeutic principles to education. Rogers proposed that positive human relationships facilitate personal growth, advocating for instruction grounded in human relations rather than subject matter concepts.

In this model, the teacher assumes the role of a facilitator, embodying a counseling dynamic with students to guide their holistic development. Teachers facilitate students' exploration of diverse perspectives across academic, personal, and interpersonal domains. This approach cultivates a collaborative learning environment

where students and educators collaborate as equals, promoting open dialogue and transparent communication.

Embracing a non-directive approach, the emphasis lies in nurturing students' growth rather than dictating the trajectory of their learning journey. This approach prioritizes the cultivation of enduring learning dispositions and robust, self-directed personalities over short-term instructional or content-based objectives. The non-directive educator exercises patience and refrains from pressuring immediate outcomes, maintaining a steadfast commitment to long-term educational goals.

At the heart of this teaching principle is Rogers' philosophy of non-directive counseling, which emphasizes clients' innate ability to guide their life experiences in constructive ways. Similarly, in non-directive instruction, educators respect students' autonomy to identify challenges and design solutions.

Operating within a nondirective framework, the educator endeavors to empathetically engage with students' perspectives, fostering an atmosphere of empathic communication conducive to nurturing students' self-direction and agency. Through reflective dialogue, the educator facilitates students' introspection, enhancing their awareness of perceptions and emotions, thus facilitating cognitive clarity and self-understanding.

Furthermore, the educator assumes the role of a compassionate mentor, embracing students' thoughts and emotions without judgment or condemnation, thereby conveying an implicit message of unconditional acceptance. By acknowledging both positive and negative affective experiences, the educator contributes to students' emotional maturity and facilitates the emergence of constructive resolutions.

The educator relinquishes the traditional authoritative stance, adopting instead a facilitative role centered on attending to students' emotional well-being. Within the context of a nondirective interaction, the relationship between educator and student is characterized as a collaborative partnership. Consequently, when students articulate challenges such as academic struggles, the educator refrains from prescribing solutions outright, opting instead to facilitate a process of emotional exploration and self-discovery. Through this process, students are empowered to identify and enact meaningful changes autonomously.

In a non-directive atmosphere, there are four key qualities. First, the teacher demonstrates warmth and responsiveness, genuinely valuing and accepting each student as an individual. Second, there's an atmosphere of permissiveness where students feel free to express their emotions without fear of judgment or moralization. Third, students are allowed to express their feelings symbolically without feeling the need to act on them or control the teacher's response. Fourth, the relationship is devoid of pressure or coercion, with the teacher refraining from displaying personal biases or reacting critically to the student. Instead, every learning task is seen as an opportunity to support the student's personal growth.

To discover the underlying emotions behind a student's question, it is best to let their emotions surface naturally. Instead of directly asking students about their emotions, teachers encourage students to take the lead in the conversation. By expressing themselves freely, students can reveal their concerns and accompanying emotions. Reflecting on these feelings helps to focus them more clearly and increase awareness. However, mastering this skill is challenging because we often tend to focus more on the content of what people are saying than on the emotional nuances of their communication.

This pattern consists of five phases. Initially, it included defining helpful situations, including structured comments, allowing students to express emotions freely, and establishing meeting procedures. Over time, the teacher may occasionally provide organization or definitions. In the second stage, teacher acceptance and clarification encourage students to express their feelings and discuss issues. In the third stage, students gradually develop a deep understanding of the meaning of personal experiences and past actions. The fourth stage is when students plan and make decisions, and the teacher clarifies the options. Finally, in the fifth stage, students report on their actions and plan further steps. This model emphasizes student-centered teaching that fosters well-rounded development and long-term learning skills in a safe, free learning environment (Joyce et al., 2015).

According to Chunqiu (2019), in the Proceedings of the 2019 3rd International Conference on Economics, Management Engineering, and Education Technology (ICEMEET 2019), a teaching mode, as a learning environment, significantly influences students' potential for self-integration, learning efficiency, and the development of objective self-evaluation. The "non-directive" teaching mode is grounded in the belief

that individuals can autonomously and actively develop their abilities during the developmental process and emphasizes the role of positive interpersonal relationships in fostering human development. This teaching theory advocates for a student-centered approach and emphasizes the importance of addressing emotional factors to establish harmonious teacher-student relationships and cultivate a conducive teaching atmosphere. Wang's paper explores the principles of "non-directive" teaching, identifies issues with current teaching practices in China, and discusses perspectives from both teachers and students, as well as the dynamics of teacher-student relationships and emotional education theories within this framework. Through an objective examination of "non-directive teaching," the paper highlights its inherent value and addresses procedural gaps, enhancing the stability and practicality of the teaching model.

### **Mental Health Education Course**

Guidelines for Mental Health Education for Students in Colleges and Universities (Ministry of Education, PRC, 2018), required that college student's mental health education courses should better adapt to and meet the needs of students' mental health education services, guide students to correctly understand justice and interests, group and self, success and failure, gain and loss, and cultivate students' self-esteem, self-confidence, rationality, peace, and positive attitudes. A healthy mentality promotes the coordinated development of students' mental health and ideological, moral, scientific, and cultural quality. Adhere to the development of mental health education for all students, be responsible for the mental health development of each student, pay attention to individual differences of students, pay attention to the innovation of methods and methods, and carry out mental health education in layers and categories to meet the needs of different student groups for mental health services. Innovate the teaching methods of mental health education, effectively improve the teaching mode and teaching method through offline and online, case teaching, experience activities, behavior training, psychological sitcoms, and other forms, stimulate students' interest in learning, improve classroom teaching effects, and continuously improve Teaching Quality.

According to these guidelines, mental health education is compulsory for college students. The main tasks are to publicize and popularize mental health care

knowledge and help college students understand the importance of healthy psychology to their growth and success. Guide college students to establish mental health awareness, understand the laws of psychological activities and their personality characteristics, master mental health knowledge and psychological adjustment methods, and learn to resolve psychological distress; guide them to deal with environmental adaptation, learn to become talented, interpersonal communication, love feelings, job hunting, career selection, etc. Confused about personality development, emotion regulation, and setback coping, resolve psychological problems, prevent the occurrence of psychological diseases and crisis events, and promote healthy growth; guide college students to establish self-awareness, learn to understand and evaluate themselves correctly, accept themselves, and enhance adaptation to social life Ability, stress management ability, learning and development ability, problem-solving ability, interpersonal communication ability, self-management ability, scientific planning of your future and life. Guide students to have an optimistic and aggressive attitude towards life, learn to learn, cultivate creative thinking, train strong will, optimize psychological quality, cultivate healthy personality, develop psychological potential, and promote all-round success.

**Targets:**

1. Knowledge level: Through the teaching of this course, students can understand the relevant theories and basic concepts of psychology, clarify the standards and meanings of mental health, understand the characteristics and abnormal performance of people's psychological development at the university stage, and master the basic knowledge of self-adjustment.

2. Skill level: Through the teaching of this course, students can master self-exploration skills, psychological adjustment skills, and psychological development skills, such as learning development skills, environmental adaptation skills, stress management skills, communication skills, problem-solving skills, self-management skills, interpersonal skills, and career planning skills.

3. Self-awareness level: Through the teaching of this course, students can establish the self-consciousness of mental healthy development, understand their own psychological characteristics and personality characteristics, and objectively evaluate their physical conditions, psychological conditions, and behavioral abilities.

Recognize and accept yourself, be able to adjust yourself or seek help when encountering psychological problems, and actively explore a life state that suits you and adapts to society.

Course requirements: The mental health education course includes teaching psychological knowledge, experience of psychological activities, and training in psychological adjustment skills. It is a comprehensive course integrating knowledge, experience, and training. The course should link theory with practice and cultivate students' practical application ability. The course gives full play to the initiative and creativity of teachers and students in teaching. Teachers respect students' subjectivity, can fully mobilize students' enthusiasm for participation, carry out classroom interactive activities, and avoid traditional theoretical indoctrination and knowledge transfer.

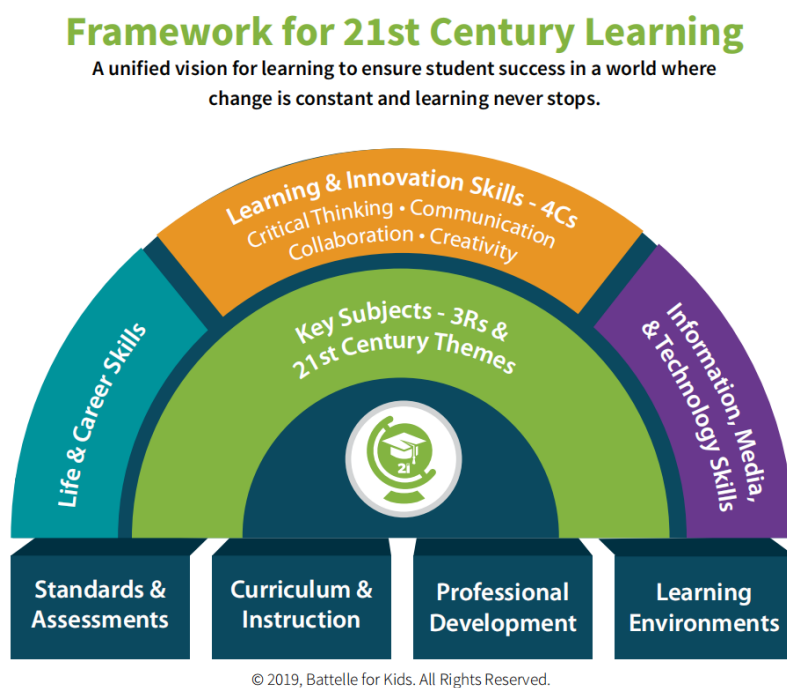
The Mental Health Education Course. The curriculum of Guangxi International Business Vocational College covers all three learning areas of mental health education: The Basics of Mental Health. Knowing and developing oneself. Improve Mental Adjustment Ability

The Mental Health Education Course covered by the Ministry of Education of college students' mental health education curriculum in common colleges and universities helps the students understand the effects of all aspects of psychological health, master the adjustment method of dealing with psychological problems, improve the psychological quality, develop their potential, both pay attention to imparting knowledge and focus on improving the student's ability of practical application, makes every effort to let the students learn.

## **Related Research**

The P21 Skills Framework, established in 2002, is a coalition of educational, governmental, and corporate leaders dedicated to promoting 21st-century readiness among all learners (P21, [www.p21.org](http://www.p21.org)). The framework outlines the essential competencies necessary for thriving in the modern workforce and society, emphasizing the skills needed for successful employment and active citizenship in the current era (Kilbane & Milman, 2013). The P21 Framework recognizes the importance of traditional subjects like reading, writing, and arithmetic, but it also emphasizes the need for additional skills in the digital age. These include creativity,

communication, collaboration, and critical thinking, known as the "4Cs." The framework asserts that these skills are just as crucial as the traditional subjects for success in college and the workforce. Additionally, it promotes lifelong learning skills for future success. The framework guides educational decisions by outlining specific student outcomes in four key areas: Core Subjects and 21st Century Themes, Learning and Innovation Skills, Information, Media, and Technology Skills, and Life and Career Skills.



**Figures 2.1** Framework for 21st-Century Learning

Roger & Freiberg (1994) said the theoretical model of the person who emerges from therapy or from the best of education, the individual who has experienced optimal psychological growth: a person functioning freely in all the fullness of all the organismic potentialities: a person who is dependable in being realistic, self-enhancing, socialized, and appropriate in behavior; a creative person, whose specific forming of behavior are not easily predictable; a person who is ever changing, ever developing, always discovering the newness in each succeeding moment of time.



Rogers' non-directive teaching goal is self-actualization. Rogers believes that self-actualization is the basic potential of human beings, and it is an innate need for self-expression. According to Rogers, a self-actualized person is one who is able to act spontaneously and take responsibility for his activities, who is able to choose rationally and set his own direction. Self-actualized people are good at critically learning and evaluating the contributions of others. They adapt flexibly and intelligently to new problem situations. Able to apply relevant experience freely and creatively to solve problems and cooperate well with others in various activities. Self-actualization is the long-term goal pursued by Rogers' "non-directive teaching". This long-term goal will promote the development of students' potential, personality improvement, and help students eventually become a sound personality and self-development, in line with the 21st century talent training requirements.

Wang (2019) discussed the ideas and inspirations of teacher view, student view, teacher-student relationship and emotional education theory to "non-directive" teaching. And He compared the difference of the paradigm instruction model, mastering the learning instruction model, discovery instruction model, anchored teaching mode. "Non-directive" teaching mode advocates student-centered teaching. All teaching activities and curriculum design should be developed according to the characteristics and needs of students, what to teach, how to teach, and how much to teach. Students' creative learning shows that students are the masters of learning activities, the performers of educational purposes, and the active explorers and reflectors in learning activities. The purpose of teaching is to develop an individual's personality and long-term learning style, not just short-term teaching goals. The "non-directive" teaching mode encourages and inspires students' thinking, and attaches great importance to students' personality perfection, mental health and non-intellectual factors.

Gou et al. (2020) believed that teachers need to master teaching theories developed based on psychology, such as Rogers' non-directed instruction model. Strengthen the mental health education and training of all teachers, and develop the habit of reflecting frequently, asking questions frequently, and improving frequently around many problems in the development of students' mental health in education and teaching activities.

Ding (2012) studied the use of non-directive instruction in mental health education. He believes that non-directive teaching, as a targeted education mode can promote the professionalism of mental health education and improve the effect of mental health education. Non-directive teaching can reflect the people-oriented characteristics of mental health education. There is a desire for education to contribute as much as possible to both self-actualization and personal peace, harmony and mental health, as well as to socialization. The emphasis is more on helping people to live purposefully and passionately in self-actualization and inner harmony than on instilling a desire to accept a certain cultural social need as the highest value. Rogers pays attention to the internal emotional factors of individuals. The essence of non-directive teaching is a kind of emotional teaching, which is more important in mental health education. Only by paying attention to students' emotions and giving full play to students' subjectivity can we ensure the people-oriented characteristics of mental health education.

From the research of the above scholars, we know that Rogers' non-directive instruction model is the most important for the improvement of personality, problem-solving ability, sense of control, and mental health level. We can speculate that using Roger's theory to teach mental health education courses can improve students' adversity quotient.

Juwita and Usodo (2020) reviewed study focusing on adversity quotient in the field of education and concluded the role of adversity quotient is much shown in learning outcomes in the field of skills. Adversity quotient affects character building and student learning effect. At the adversity quotient level, students with high adversity quotient showed better ability to fight against difficulties. They have a strong desire and motivation to solve their difficulties, so they have better potential than those who score in the middle of the adversity quotient and those who score low. Students who scored moderately on the adversity quotient also showed an ability to struggle in the face of difficulties, but they did not struggle so persistently that they gave up when the difficulties they faced felt heavy. They are not able to maximize their potential and achievements; They are easily satisfied with the results they get. They can do a good analysis and identify steps/conclusions, even if still limited. Students with low scores in adversity quotient quickly give up when they encounter difficulties.

Hulaikah et al. (2020) recruited 120 higher vocational accounting students as experimental subjects, and compiled the Student Adversity Consultation Form (SAQP) and the problem-solving criteria of Polya. The study found that students' problem-solving skills differed between high and low adversity.

Widodo et al. (2022) used voluntary questionnaires from 589 primary school teachers in Indonesia. The result shows that emotional intelligence, adversity quotient, and organizational citizenship behavior have a significant relationship with teachers' professional competence. However, adversity quotient more strongly promotes teachers' organizational citizenship behavior and professional competence than emotional intelligence does.

Bingquan et al. (2019) developed the University Student Adversity Consultation Form (AQS), an accepted standard for measuring adversity quotient in Chinese universities. In the study, he used the literature data method and the open survey method to conduct a questionnaire survey on 578 students to form the final scale. Through project analysis, exploratory factor analysis and confirmatory factor analysis. Results: The adversity table consisted of 43 questions and 6 dimensions. The reliability coefficients of each dimension of the scale ranged from 0.684 to 0.917. The correlation validity quotient and Social Adaptation Scale (SAS) between adversity were both 0.291, and the difference was significant at 0.01 level. Conclusion: The stress table has good reliability and validity, and can be used as an effective measurement tool.

The study by Prakaew and Leesattrupai (2017) on "The Effects of Adversity Quotient Development Program on Stress in Mutthayomsuksa 3 Students in Bangkok" demonstrates that adversity quotient (AQ) can be significantly enhanced through targeted training programs. The research, involving 90 students, found that participation in a six-week AQ development program led to increased AQ levels and decreased stress levels among participants, highlighting the effectiveness of such interventions in improving resilience and stress management abilities. Similarly, Chen's (2022), through the literature review method, Research on adversity quotient proves that individual inverse quotient can be cultivated and has health care effect on individual's physical and mental health.

Saguni et al. (2021) investigated the correlation between teacher professionalism and student-autonomous learning in Madrasah Aliyah, Central

Sulawesi, Indonesia, focusing on adversity quotient (AQ). Employing a quantitative approach with 36 students and 19 teachers, they found no significant relationship between AQ and teacher professionalism, but a strong correlation between AQ and student autonomous learning. This underscores the importance of enhancing AQ among teachers to support student achievement and national development. The study highlights the need for positive support, especially in remote areas with low teacher professionalism, while also advocating for equitable opportunities for student autonomous learning as a form of social justice.

Concluding idea about Rogers' theory of adversity quotient and learning process

**Table 2.1** Concluding idea about Rogers' theory of adversity quotient and learning process

Rogers' theory	adversity quotient	Learning Process
Rogers's Theory advocates for a student-centered educational approach characterized by trust, empathy, and understanding. It emphasizes non-directive teaching methods, wherein students learn autonomously based on their interests and preferences. Teachers create supportive environments fostering freedom and acceptance to guide students toward self-realization. Learning, as per Rogers,	The adversity quotient refers to a person's ability to overcome challenges and overcome difficulties (Stoltz, 1997). Adversity Quotient is structured around four distinct dimensions known as the CORE components: - Control (C): This dimension assesses an individual's perception of their control over adverse events. - Ownership (O): It evaluates both the source of adversity and the degree to which the individual holds	Step 1: Emotionally driven problem definition entails the teacher fostering a supportive environment for students to freely express their emotions in response to new knowledge topics. Through active listening and clarification, the teacher helps students understand and articulate their feelings, facilitating a clearer problem definition. Step 2: Problem Discussing involves the teacher presenting and explaining the problem to students, nurturing a positive

Table 2.1 (Continued)

Rogers' theory	adversity quotient	Learning Process
<p>encompasses cognitive, emotional, and intuitive dimensions, necessitating inclusive environments for holistic development. Teachers' authenticity and empathy are pivotal in building rapport and facilitating student growth. Rogers's framework underscores the importance of valuing students' individuality, promoting self-esteem, and instilling a lifelong love for learning. By embodying qualities of authenticity, acceptance, and empathy, teachers empower students to become self-directed learners, fostering personal development and growth. (Rogers, 1995)</p>	<p>themselves accountable.</p> <ul style="list-style-type: none"> <li>- Reach (R): This dimension gauges the extent to which adversity affects various aspects of the individual's life.</li> <li>- Endurance (E): It focuses on the anticipated duration of the adversity.</li> </ul> <p>Together, these dimensions offer a comprehensive insight into how individuals perceive, respond to, and endure challenges in their lives.</p>	<p>learning atmosphere, and emphasizing the teacher-student relationship. Students engage in discussing the problem, exploring known aspects and areas for further learning.</p> <p>Step 3: Planning and decision making require the teacher to clarify potential decisions while students plan initial decision-making processes. Students determine which responsibilities they will undertake to address specific aspects of the problem.</p> <p>Step 4: Action necessitates the teacher creating an environment of trust and support, embodying qualities of realness, acceptance, and empathy. Students gain insight and take positive actions, addressing the problem by considering additional information needed and strategies to control, limit, and endure adversity.</p> <p>Step 5: Evaluating and</p>

Table 2.1 (Continued)

Rogers' theory	adversity quotient	Learning Process
		Feedback involve the teacher respecting students' learning outcomes and providing timely feedback, encouraging active exploration. Students self-assess their learning, evaluating mastery of desired knowledge, assumption of responsibilities, application of new knowledge, and achievement of goals within set timeframes.

# Chapter 3

## Research Methodology

The methodology of this research was research and development (R&D). The research objectives were: 1) To study the current situation of adversity quotient development. 2) To develop an instructional model based on Rogers' theory. 3) To compare students' adversity quotient before and after using the instructional model based on Rogers' theory. This research was a multi-sequenced design and equivalent status design: qualitative research and quantitative research. Research design, research processes, and data analysis were presented as follows.

### **Step 1 Studying the current situation of adversity quotient of college freshman students in Guangxi International Business Vocational College.**

#### **The Population / The Sample Group**

##### **The Population**

Experts in adversity quotient development

##### **The Sample Group**

adversity quotient development experts, consisting of 5 academic experts who are lecturers with more than five years of experience.

#### **Research Tools**

##### **1. Instruments**

1) Questionnaire about the current situation and existing problems of the adversity quotient of college student

2) Interview form about the current situation and existing problems about the adversity quotient of college student

3) Assessment form for the validity of the questionnaire about the current situation and existing problems of adversity quotient development

4) Assessment form for validity of the Interview Schedule of the current situation and existing problems about the adversity quotient of college student

## 2. The development process of research tools

2.1 The development process of the questionnaire about the current situation and existing problems of adversity quotient development

1) The questionnaire's conceptual framework and development process of adversity quotient development were studied.

2) Drafted questionnaire including 20 questions: Rating Scale of Likert Scale 5 level with strongly agree, agree, unsure, disagree, strongly disagree.

3) Verified questionnaire by advisers.

4) Modified the questionnaire according to advisers' suggestions.

5) Five experts verified the validity of the questionnaire. Three come from Thailand, and the other two come from China. The test consistency index of congruency is 1.00, which is from the second part in Appendix C

6) Modified the questionnaire according to suggestion

2.2 The development process of Interview form about the current situation and existing problems of adversity quotient development

1) Studied the concept and development process of interview form of the current situation of adversity quotient development

2) Drafted interview form.

3) Verified interview form by advisers.

4) Modified the interview form according to suggestion.

5) 5 experts verified the validity of the interview form. Three come from Thailand, and the other two come from China. The test consistency index of congruency is 1.00, which is from the second part in Appendix C

6) Modified the interview form according to suggestion

2.3 The development process of assessment form for the validity of the current situation and existing problems of adversity quotient development

1) Studied the concept and development process of the assessment form for the validity of the questionnaire.

2) Drafted assessment form for the validity of the questionnaire on the current situation of adversity quotient development. The level of consideration is as follows:



The rating is +1. There is an opinion that “Corresponds to definition.”

The rating is 0. There is an opinion that “Not sure it corresponds to definition.”

The rating is -1. There is an opinion that “Inconsistent with definition.”

The test consistency index of congruency is 1. At the end of each section, there is a space for experts to write suggestions that can help improve.

3) Advisers verified the assessment form for the validity of the questionnaire.

4) Modified the assessment form for the validity of the questionnaire according to suggestion.

2.4 The development process of the assessment form for the validity of the interview form about the current situation and existing problems of adversity quotient development

1) Studied the concept and development process of the assessment form for validity of the interview form, which aims to study the current situation and existing problems about the adversity quotient of college students.

2) Drafted assessment form for the validity of interview form of the current situation of adversity quotient development. The level of consideration is as follows:

The rating is +1. There is an opinion that “Corresponds to definition.”

The rating is 0. There is an opinion that “Not sure it corresponds to definition.”

The rating is -1. There is an opinion that “Inconsistent with definition.”

The test consistency index of congruency is 1. At the end of each section, there is a space for experts to write suggestions that can help improve.

3) The assessment form was verified for the validity of the interview form by advisers.

4) Modified the assessment form for the validity of the interview form according to the suggestion.

### 3. Data collection

1) Coordinate with five experts in adversity quotient development, dispense official documents from Bansomdejchaopraya University to 5 academic and

professional scholar's experts, and give information about research tools and data collection process.

2) The researcher collected data from 5 experts in adversity quotient development about the current situation of adversity quotient development through questionnaires and interview form about the current situation of adversity quotient development

3) Analysis of data about the current situation of college students' adversity quotient development

#### 4 Data Analysis

The data were analyzed as follows.

1) Quantitative data were analyzed through means and standard deviation and calculated the average of the suitability score from the opinion of experts to be compared with the criteria as follows:

- A mean score of 4.51 to 5.00 is interpreted as "Strongly Agree."
- A mean score of 3.51 to 4.50 is interpreted as "Agree."
- A mean score of 2.51 to 3.50 is interpreted as "Unsure."
- A mean score of 1.51 to 2.50 is interpreted as "Disagree."
- A mean score of 1.00 to 1.50 is interpreted as "Strongly Disagree."

2) Qualitative data were analyzed through content analysis method

Through interviews and open questions to collect the content related to college students' adversity quotient, and then according to the goal of studying the current situation of college students' adversity after coding analysis to get the relevant concepts.

**Table 3.1** Research Process Step 1

<b>Research objective</b>	To study about the current situation of adversity quotient of college freshman students in Guangxi International Business Vocational College.
<b>Research Process</b>	1) Develop research Tools 2) Check validity 3) Collect data 4) Analysis data
<b>Research Target group</b>	adversity quotient development experts, consisting of 5 academic and professional experts
<b>Research instrument</b>	1) Questionnaire, 2) Interview 3) Assessment form for validity of questionnaire 4) Assessment form for validity of interview
<b>Data collection</b>	1) Coordinate with 5 experts in adversity quotient development 2) Researcher collect data from 5 experts in adversity quotient
<b>Data Analysis</b>	1) Quantitative data were analyzed through means, and standard deviation, 2) Qualitative data were analyzed through content analysis method.

## Step 2 The development of the instructional model

### 1. The instructional model development

The process of development of an instructional model based on Rogers' theory was presented as follows.

1) Studied the instructional model development process and the detail from first step. The initial stage of the study involves a critical analysis of the current situation and prevailing problems of college students' adversity quotient. The study found that the main challenge is that the existing learning process is not professional and attractive, followed by students' own interest in and importance to the knowledge of adversity quotient, and finally, the resources provided by schools and teachers' teaching professional ability.

2) The instructional model components were determined: principle, objective, learning process, and result.

3) Drafted the details of the instructional model including 5 steps of the learning processes: emotionally driven problem definition, problem discussing, planning and decision making, action, and evaluating and feedback.

4) Advisers verified the details of the instructional model to ensure accuracy and effectiveness.

5) Following the advisers' suggestions, adjustments were made to refine and enhance the instructional model's details.

6) The five professional scholars verified the details of the instructional model. Three come from Thailand, and the other two come from China.

7) Incorporating feedback from the scholarly panel, additional revisions were implemented to further refine and optimize the details of the instructional model.

## **2. Research Tools**

Assessment form for Validity of the instructional model

### **2.1 The development process of assessment form for Validity of the instructional model**

1) Studied the concept and development process of assessment form for Validity of the instructional model

2) Drafted the assessment form for Validity of the instructional model. At the end of each section, there is a space for experts to write suggestions that can help improve.

3) Verified assessment form for the validity of the instructional model by advisers.

4) Modified the assessment form for validity of the instructional model according to suggestion.

## **3. Data collection**

1) Coordinate with 5 professional scholars to dispense official documents from Bansomdejchaopraya University to 5 professional scholars and give information about the data collection process and research tools instructional model and assessment form for the validity of the instructional model (Index of Objective Consistency: IOC).

2) Collect data from 5 professional scholars and analysis data for consideration (Index of Objective Consistency: IOC)

#### 4. Data Analysis

1) Statistics used to analyze tool quality use the index of consistency as a criterion for consideration (Index of Objective Consistency: IOC)

2) Concluding ideas about research process step 2 are shown as follows.

**Table 3.2** Research Process Step 2

Research objective	To develop instructional model
<b>Research Process</b>	1) Studied about instructional model development process and research result in step 1. 2) Determined the instructional model components. 3) Drafted the detail of the instructional model 4) Verified the details of the instructional model by advisers. 5) Modified the details of the instructional model according to suggestion. 6) Verified the details of the instructional model by the 5 professional scholars. 7) Modify the details of the instructional model according to suggestions
<b>Research Target group</b>	5 professional scholars
<b>Research instrument</b>	Assessment form for Validity of the instructional model
<b>Data collection</b>	1) Coordinate with 5 professional scholars 2) Researcher collect data from 5 professional scholars
<b>Data Analysis</b>	Tool quality analysis depends on the Index of Objective Consistency (IOC), assessing alignment between research instrument goals and outcomes.

### **Step 3 The experimental and improvement of the instructional model**

This research adopts an experimental approach, employing a Group Pretest-Posttest Design. Before the intervention, participants underwent a pretest to establish their baseline levels of the targeted variables. Subsequently, after the intervention, a posttest was administered to assess any changes or improvements resulting from the intervention. This experimental design facilitates the examination of changes within a single group before and after intervention implementation, allowing for the evaluation of the effectiveness of the instructional model. It was used with the following experimental design:

#### **1. The Population / The Sample Group**

##### **The Population**

104 freshmen of Infant and child care services and management major of Guangxi International Business Vocational College

##### **The Sample Group**

The cluster random sampling method selected 33 freshmen from Infant and child care services and management major at Guangxi International Business Vocational College.

#### **2. Research Instruments**

- 1) Lesson plans according to the instructional model
- 2) Adversity Quotient Scale
- 3) Observation form about student behavior
- 4) Interview form about opinions on teaching
- 5) Assessment form for validity of lesson plan according to the instructional model
- 6) Assessment form for Validity of Adversity Quotient Scale
- 7) Assessment form for Validity of observation form about Student behavior
- 8) Assessment form for Validity of opinions on the teaching interview form

#### **3. The development process of the Research Tools**

3.1 The development process of the lesson plan according to the instructional model.

- 1) Studied the concept and development process of the lesson plan.
- 2) Determined lesson plans elements: (1)concept, (2)content, (3)objective, (4)learning processes, (5)learning resources, (6) evaluation.
- 3) Studied the details of the instructional model.
- 4) Drafted lesson plan according to the instructional model. This study mainly selects from Unit 1 to Unit 3 : 20 hours in total.
- 5) Verified the details of the lesson plan by advisers
- 6) Modified the details of lesson plans according to suggestion
- 7) Verified the details of the lesson plan by 5 professional scholars consistent with the research objectives and concepts to the following criteria.

The rating is +1. There is an opinion that “Corresponds to definition.”

The rating is 0. There is an opinion that “Not sure it corresponds to definition.”

The rating is -1. There is an opinion that “Inconsistent with definition.”

Find the IOC (Index Objective Congruence). The analysis result of the IOC (Index Objective Congruence) is 1.00, which is in Appendix C.

- 8) Modified lesson plan according to the recommendations.

### 3.2 Adversity Quotient Scale

Studied the concept of adversity quotient.

Selected Adversity Quotient Scale: consists of 60 items in 30 situations. It is accepted by Chinese universities, made by Li and Chen (2008), according to Stoltz (1997). Students were invited to carefully imagine each event and then answer the two questions that followed. The scale adopts a 5-point scoring method, with five grades of "1", "2", "3", "4" and "5", and students are evaluated between 1 and 5 according to their psychological feelings. The higher the total score, the higher the adversity quotient level, the retest reliability of the scale is 0.72-0.79, and the total score and coefficient  $\alpha$  of each dimension are above 0.70, which can be used to determine the adversity quotient of Chinese students (Li & Chen, 2008). Apply to another group of freshmen from the accounting major of Guangxi International Business Vocational College and check the test's reliability. In this study, the coefficient  $\alpha$  of this scale was 0.85.

The Adversity Quotient Scale consists of 30 situations and 60 items, divided into 4 dimensions:

- Control (10 items: 1, 11, 15, 17, 31, 35, 37, 51, 55, 57)
- Ownership (10 items: 5 items measure external attributions of confidence due to uncontrollable adversity, and 5 items measure internal attributions of responsibility due to controllable adversity: 2, 16, 32, 28, 58; 12, 18, 36, 52, 56)
- Reach (10 items: 3, 7, 13, 21, 23, 27, 29, 41, 43, 47)
- Endurance (10 items: 4, 8, 14, 22, 24, 28, 30, 42, 44, 48)

The AQ Scale primarily measures individuals' control and attributions to adversity, as well as the scope and duration of adversity's impact, using 20 adversity situations, totaling 40 items. Additionally, the scale includes 10 prosperity situations, with 2 questions each, totaling 20 items, measuring individuals' control and attributions to prosperity and the scope and duration of prosperity's impact. Since adversity merchants are not reflected in prosperity situations, these 20 items are not included in AQ scoring. The scale is scored on a 1-5 point scale, the total score for the Adversity Quotient (AQ) Scale is 200 points, with higher scores indicating higher AQ levels.

### 3.3 Observation form about student behavior

- 1) Investigated the concept and developmental stages of the Observation form focusing on student behavior.
- 2) Formulated the initial draft of the Observation form tailored to capturing student behavior.
- 3) Verified the intricacies of the Observation form concerning student behavior with advisers.
- 4) Revised the specifics of the Observation form related to student behavior in response to feedback.
- 5) Validated the details of the Observation form regarding student behavior with input from five experts. achieving a perfect congruency index of 1.00 as indicated in Appendix C.
- 6) Incorporated specific recommendations to enhance the Observation form about student behavior.

### 3.4 Interview form about student behavior

- 1) Explored the concept and evolution of the Interview form concerning student behavior, examining its developmental trajectory.



2) Created a preliminary draft of the Interview form designed to capture student behavior comprehensively.

3) Confirmed the accuracy and effectiveness of the Interview form regarding student behavior through adviser verification.

4) Adjusted and refined the details of the Interview form related to student behavior based on constructive feedback.

5) Validated the thoroughness and consistency of the Interview form focusing on student behavior with input from five experts, achieving a perfect congruency index of 1.00 as indicated in Appendix C.

6) Incorporated specific recommendations to enhance the Interview form about student behavior, ensuring its effectiveness in capturing relevant data.

3.5 The assessment form's development process for the lesson plan's validity according to the instructional model.

1) Studied the concept and development process of assessment form for validity of lesson plan according to the instructional model.

2) Drafted assessment form for validity of lesson plan according to the instructional model. The level of consideration is as follows:

The rating is +1. There is an opinion that "Corresponds to the lesson plan topics."

The rating is 0. The opinion is that "Not sure it corresponds to the lesson plan topics."

The rating is -1. There is an opinion that "Inconsistent with the lesson plan topics."

The test consistency index of congruency is 1. At the end of each section, there is a space for experts to write suggestions that can help improve.

3) Advisers verified the assessment form for the validity of the lesson plan according to the instructional model.

4) Modified the assessment form for validity of lesson plan according to the instructional model according to suggestion.

3.6 The development process of the assessment form for the validity of the observation form about student behavior

1) Studied the concept and development process of the assessment form for validity of the observation form about student behavior.

2) Drafted assessment form for validity of observation form about student behavior. The level of consideration is as follows:

The rating is +1. There is an opinion that “Corresponds to opinion.”

The rating is 0. There is an opinion that “I'm not sure it corresponds to my opinion.”

The rating is -1. There is an opinion that is “Inconsistent with opinion.”

The test consistency index of congruency is 1. At the end of each section, there is a space for experts to write suggestions that can help improve.

3) Advisers verified the assessment form's validity of the observation form about student behavior.

4) Modified the assessment form for validity of observation form about student behavior according to suggestion.

3.7 The development process of the assessment form for the validity of the Interview form about student behavior

1) Studied the concept and development process of assessment form for validity of Interview form about student behavior

2) Drafted assessment form for validity of Interview form about student behavior. The level of consideration is as follows:

The rating is +1. There is an opinion that “Corresponds to opinion.”

The rating is 0. The opinion is “Not sure it corresponds to your opinion.”

The rating is -1. There is an opinion that is “Inconsistent with opinion.”

The test consistency index of congruency is 1. At the end of each section, there is a space for experts to write suggestions that can help improve.

3) Verify the assessment form to validate the interview form about student behavior by advisers.

4) Modified the assessment form for the validity of the Interview form about student behavior according to suggestion.

#### **4. Data Collection**

1) Prior to the class, 33 freshmen enrolled in the Infant and Childcare Services and Management program at Guangxi International Business Vocational College completed the Adversity Quotient Scale test.

2) Following the new teaching approach, the Business Improvement course for the freshmen in the Infant and Child Care Services and Management program at Guangxi International Business Vocational College is structured into three units. Each week consists of two classes, with each class lasting 150 minutes, totaling 20 class hours to be completed over four weeks.

3) The study involving 33 freshmen enrolled in the Infant and Child Care Services and Management program at Guangxi International Business Vocational College adhered to the teaching methodology prescribed by the Business Vocational College. Activities and lesson plans were observed and students were interviewed.

4) The Adversity Quotient Scale test was administered to 33 freshmen enrolled in the Infant and Childcare Services and Management program at Guangxi International Business Vocational College.

5) Data analysis was conducted, and adjustments to the teaching model were made based on the experts' recommendations provided.

## **5. Data Analysis**

1) Assessment of Tool Quality Utilizing the Consistency Index (Index of Objective Consistency: IOC). In the evaluation of tool quality, the Consistency Index (IOC) served as a primary criterion for consideration. This index provided a standardized measure to assess the reliability and consistency of the tools employed in the study, ensuring robustness in the analysis process.

2) Quantitative data underwent thorough analysis through inferential statistics. Subsequently, to gauge the effectiveness of the instructional model, t-tests for dependent samples were utilized to scrutinize the variance in adversity quotient scores before and after its implementation. This statistical approach allowed for the identification of significant differences, providing valuable insights into the impact of the instructional model on students' adversity response.

3) Qualitative data underwent a comprehensive content analysis. This involved a meticulous examination of the content derived from observations and experimental interviews. Through this qualitative analysis, deeper insights into students' experiences and perceptions were uncovered, enriching the overall understanding of the effectiveness and potential areas for improvement of the instructional model.

Table 3.3 Research Process Step 3

Research objective	To experiment and improvement of the instructional model
<b>Research Process</b>	<ol style="list-style-type: none"> <li>1) The sample group were tested</li> <li>2) The sample group were experimented</li> <li>3) Researcher observe and interview the sample group</li> <li>4) The sample group were tested</li> <li>5) Analyze data</li> </ol>
<b>Research Target group</b>	The cluster random sampling method selected 33 freshmen from Infant and child care services and management major of Guangxi International Business Vocational College.
<b>Research instrument</b>	<ol style="list-style-type: none"> <li>1) Lesson plan according to the instructional model</li> <li>2) Adversity Quotient Scale</li> <li>3) Observation form about student behavior</li> <li>4) Interview form about opinions on teaching</li> <li>5) Assessment form for validity of lesson plan according to the instructional model</li> <li>6) Assessment form for Validity of Adversity Quotient Scale</li> <li>7) Assessment form for Validity of observation form about Student behavior</li> <li>8) Assessment form for Validity of opinions on the teaching interview form</li> </ol>
<b>Data collection</b>	<ol style="list-style-type: none"> <li>1) Pre-test: Adversity Quotient Scale test.</li> <li>2) Experiment: The sample group were experiment by using instructional model</li> <li>3) Researcher observe and interview</li> <li>4) Post-test: Adversity Quotient Scale test</li> </ol>
<b>Data Analysis</b>	<ol style="list-style-type: none"> <li>1) Statistics used to analyze tool quality</li> <li>2) Quantitative data were analyzed through inferential statistics</li> <li>3) Qualitative data were analyzed by content analysis</li> </ol>

# Chapter 4

## Results of Analysis

The methodology of this research was research and development (R&D). The research objectives were to 1) study the current situation of adversity quotient development, 2) develop an instructional model based on Rogers' theory, and 3) compare students' adversity quotient before and after using the instructional model based on Rogers' theory.

Therefore, this chapter is divided into three parts:

Result of Part 1: The study on the current situation of adversity quotient development of the freshmen of the college (OB1);

Result of Part 2: The development of an instructional model based on Rogers' theory (OB2);

Result of Part 3: The experimental and improvement of the instructional model based on Rogers' theory (OB3)

### Symbol and abbreviations

$\bar{X}$	Means average value
SD.	Means standard deviation
n	Means number of students
df	Means degree of freedom
t	Means statistical data for t-test value
p	Means for p-value for dependent sample
***	Means statistical significance at level .001

The details are as follows:

### Results of Data Analysis

In this study, SPSS statistical software was utilized to analyze the general data of the participants comprehensively. The objective was to uncover the inherent characteristics of the data, investigate influential factors, and evaluate the outcomes of the teaching experiment rigorously. Various statistical tests were conducted within the SPSS environment, including assessments of reliability, validity, difficulty, and

discrimination of the tests. Descriptive statistics such as mean, standard deviation, and percentage were computed to provide a detailed summary of the data. Additionally, t-tests were employed, and corresponding p-values were calculated using SPSS to present the statistical findings pertaining to the participants' basic data, factors influencing the study, and the effectiveness of the teaching experiments.

## Result of Part 1: The study on the current situation of adversity quotient development of the freshmen of college (OB1)

### 1. Present study participants data

Five experts and scholars with master's degrees, who are engaged in psychology or adversity quotient teaching, and have more than 5 years of educational work experience participated in the questionnaire survey of the current situation of college students' adversity quotient

**Table 4.1** Frequency and percentage of respondents' common data

Respondents' common data	Frequency	Percent
(n=5)		
1. Gender		
Male	1	20.00
Female	4	80.00
<b>Total</b>	<b>5</b>	<b>100.00</b>
2. Age		
30-39	2	40.00
40-49	2	40.00
50-59	1	20.00
<b>Total</b>	<b>5</b>	<b>100.00</b>
3. Degree		
Master	2	40.00
Doctor	3	60.00
<b>Total</b>	<b>5</b>	<b>100.00</b>
4. Title		
intermediate title	4	80.00
deputy senior title	1	20.00
<b>Total</b>	<b>5</b>	<b>100.00</b>

Table 4.1 (Continued)

Respondents' common data	Frequency	Percent
(n=5)		
5. Work experience		
6-10 years	2	40.00
More than 10 years	3	60.00
<b>Total</b>	<b>5</b>	<b>100.00</b>

In Table 4.1, the trend is observed: female respondents comprise the majority at 80%. Regarding age distribution, 40% of the interviewees fall within the age range of 30 to 39 years old, while another 40% belong to the 40 to 45 years old category. Doctoral degrees emerge as the most common highest degree, representing 60% of the respondents. Intermediate professional titles hold the highest share at 60%. Moreover, individuals with over a decade of experience in psychology or adversity business teaching constitute the largest proportion, accounting for 60% of the respondents.

2. The results of the questionnaire about the current situation of adversity quotient development of the freshmen of Infant and child care services and management major of Guangxi International Business Vocational College

To effectively evaluate the adversity quotient of students at Guangxi International Business Vocational College in the context of academic research, it is essential to conduct a thorough analysis of the questionnaire survey results about the current state of adversity quotient among college students.

**Table 4.2** Summary table of information factors

	(n=5)	
Factors	$\bar{X}$	SD.
<b>Student</b>		
1.1 Student are interested in learning adversity quotient.	4.40	0.55
1.2 Students think that it is very important for them to master a certain knowledge of adversity quotient.	4.20	0.45
1.3 Students are willing to spend time learning about adversity quotient.	3.60	0.89
1.4 Students have various ways to gain knowledge of adversity quotient.	4.00	0.71
1.5 Compared with modern skills, students are more willing to learn adversity quotient related skills.	2.80	0.84
<b>Total</b>	<b>3.80</b>	<b>0. 32</b>
<b>Teacher</b>		
2.1 The teacher believes that increasing the adversity quotient is important for personal development and self-actualization.	5.00	0.00
2.2 Teachers emphasize the importance of understanding knowledge about adversity quotient with students.	4.60	0.55
2.3 Teachers ask the students to learn about how to enhance the adversity quotient.	3.40	0.55
2.4 Teachers are willing to offer and teach students the adversity quotient knowledge.	5.00	0.000
2.5 Teachers can have easy access to teaching resources related to adversity quotient.	4.60	0.55
<b>Total</b>	<b>4.52</b>	<b>0. 18</b>
<b>Learning process</b>		
3.1 Teachers create safe learning situations so that students can learn in a relaxed atmosphere.	3.60	0.55
3.2 The teaching methods and strategies adopted by the teacher are effective and make full use of various teaching resources and methods.	3.20	0.45
3.3 The classroom is dynamic and interactive.	2.40	0.55
3.4 The teacher's assessment of students' ability to learn is accurate and timely, and feedback is specific and helpful.	1.60	0.55



Table 4.2 (Continued)

	(n=5)	
Factors	$\bar{X}$	SD.
3.5 The content of the mathematics classroom is closely related to real life and is interesting.	3.00	0.71
<b>Total</b>	<b>2.76</b>	<b>0.22</b>
<b>Environment</b>		
4.1 School has done a good job of promoting the adversity quotient knowledge.	5.00	0.00
4.2 School has created a safe and supportive teaching environment helps students to learn the adversity quotient independently.	3.40	0.55
4.3 School attaches great importance to educating students about the adversity quotient.	4.20	0.48
4.4 School will incorporate the knowledge of adversity quotient of students into the students' comprehensive performance assessment.	5.00	0.00
4.5 You think that too much emphasis on professional academic achievement will reduce students' focus on improving adversity quotient	4.40	0.55
<b>Total</b>	<b>4.40</b>	<b>0.14</b>

In Table 4.2, it is apparent that the lowest adversity quotient scores among college students are attributed to the learning process ( $\bar{X}=2.76$ ,  $SD.=0.32$ ), followed by student-related factors ( $\bar{X}=3.80$ ,  $SD.=0.18$ ), environment ( $\bar{X}=4.40$ ,  $SD.=0.22$ ), and finally, teachers ( $\bar{X}=4.52$ ,  $SD.=0.14$ ). These results underscore the significant challenges present within the learning process, indicating it as the primary area of concern regarding college students' adversity quotient levels.

3. The results of the interviews about the current situation and existing problems about college students' adversity quotient

To assess the present state and challenges concerning the adversity quotient of students at Guangxi International Business Vocational College, an analysis of interview findings regarding the current status and issues related to students' adversity quotient is imperative. The interviews involved five experts and scholars

holding master's degrees, specializing in psychology or adversity quotient instruction, and possessing over five years of educational experience.

The ensuing responses from the participants are provided below, accompanied by numbers and percentages in parentheses, denoting the count of respondents offering each comment.

**Table 4.3** The results of the interviews

Question	Responses from the respondents
T1: What are the current situation and existing problems about students' adversity quotient	<p>Most experts (60%, 3 in 5) believe that the most urgent problem that needs to be solved in the current situation of college students' adversity quotient is the learning process.</p> <p>20% (1 in 5) of experts believe that the biggest problem with college students' adversity quotient is the students' own interests, values, psychological quality, and other issues.</p> <p>20% (1 in 5) of experts believe that the most important problem facing college students facing adversity is the lack of resources and support provided by schools.</p>
T2: Why do college students' adversity quotient have these current situations and problems?	<p>60% (3 in 5) of experts believe that the existing adversity quotient teaching model is more biased to the study of textbook knowledge theory and does not combine students' real-life situations with adversity. Perhaps too much attention is paid to the transfer of knowledge, and the subjective initiative of students is ignored. There is a lack of individualized teaching methods that take full account of the learning styles and needs of different students. The support and feedback teachers provide to students in the face of challenges may not be timely and effective enough.</p> <p>20% (1 in 5) of experts believe that students' individual interests, values, psychological quality, and other factors may affect their.</p>

Table 4.3 (Continued)

Question	Responses from the respondents
T3: How to improve the adversity quotient of college students?	<p>development and application of adversity quotient.</p> <p>20% (1 in 5) of experts believe that the school culture and atmosphere may not support the development of students' adversity quotient, and lack of acceptance and encouragement for challenges and failures</p> <p>60% (3 in 5) of experts believe that improving the teaching model: adopting a more flexible and diverse teaching model that integrates classroom content with real life situations and leads students to actively participate in the problem-solving process. At the same time, it provides personalized teaching methods and carries out teaching design according to different students' learning styles and needs.</p> <p>20% (1 in 5) of experts believe that focusing on individual student needs: listening to students, understanding their interests, values and psychological qualities, and providing them with personalized support and guidance to help them better cope with challenges and adversity.</p> <p>20% (1 in 5) of experts believe that fostering a supportive school culture: Fostering a positive school culture and climate that encourages students to face challenges, accept failure, and learn and grow from it. Provide students with adequate support and encouragement to help them build self-confidence and cope with adversity.</p>

According to the above statement, it can be seen that the biggest problem facing the improvement of college students' adversity quotient is mainly the learning process, followed by students' interest and motivation, and finally the influence of the school cultural environment and resources.

## **Result of Part 2: The development of an instructional model based on Rogers' theory (OB2);**

The college students' adversity quotient model, grounded in Rogers' theory and informed by findings from the OB1 study and developmental instructional model research, underwent refinement through feedback from five experts in both instructional modeling and adversity quotient theory. These experts validated the efficacy of the checklist concept and development process, yielding a score of 1 (acceptable range: 0.05-1.00).

### **The details of the instructional model are as follows:**

#### **1. Principle**

Rogers' Theory focuses on "meaning learning theory" and the development of students' personalities. Rogers' Theory emphasizes the purpose of education: not only to impart knowledge but more importantly to build a perfect personality and improve students' self-learning ability by developing their potential (Dong, 2019). The learning process should be carried out around the students. The arrangement of learning content and the generation of learning results should consider the development of student's potential and the promotion of personality. Students should have a good personality, with lifelong personality qualities and psychological well-being.

The adversity quotient is people's ability to face setbacks and rise above difficulties. Adversity quotient can improve by control, ownership, reach, and endurance (Stoltz & Stoltz, 2000). In Rogers' theoretical view, acceptance of students by teachers without external evaluation and empathic understanding is important to promote meaningful learning and help students achieve self-realization. Students turn flexible problem-solving into their subjective intentions and freely and creatively use their previous experiences to solve new problems. This gives students a sense of control over their ability to solve new problems. That helps increase the sense of control dimension of the adversity quotient. The classroom atmosphere is safe and

free from external evaluation: no external evaluation and criteria are used to define student creativity and value. In a safe learning atmosphere, students experience more openness and follow their innermost feelings. This helps students establish meaningful learning where they can learn independently, proactively, and responsibly. Active and responsible learning is the performance of students with ownership, which is also one of the dimensions of adversity quotient. Teachers deeply empathize with students. This is to try to enter the inner world of students from the standpoint of students, feel their inner emotions, and understand their behavior and expression. Such empathy by the teacher can encourage the students to feel the bad feelings in themselves that were previously suppressed. Thereby reducing the scope of the impact of new difficulties on students and preventing adversity from reaching other aspects of students' lives. When students have a safe learning environment in which they can learn meaningfully, they become more confident, better at self-expression, more comfortable solving new problems, more flexible, and smarter at adapting to new dilemmas. This can shorten the period that adversity is expected to last, that is, the endurance of adversity will be increased.

Adversity quotient related to personality and psychological well-being (Chadha, 2021). There is a significant correlation between psychological well-being and adversity quotient (Dewi et al., 2022). Based on Rogers' theory, the point of focusing on the adversity quotient is that teachers act as facilitators of students' learning in the classroom. Teachers create a free, safe, and comfortable learning environment for students, and provide students with the learning materials and resources they need so that students can freely absorb the "nourishment" and "air" they need in the "sunshine" of love. This kind of free teaching can cultivate students' sense of freedom and responsibility and find their intrinsic value and meaning. This sense of freedom and responsibility can make students more responsible in times of adversity and willing to take responsibility for new difficulties within their ability. And believe that the new dilemma is within their control, is their efforts can control its impact and duration. Spontaneous, free, and self-responsible students who are calm when adversity comes, are good at taking the initiative to deal with new problems. Therefore, using the teaching mode based on Rogers' theory helps improve students' adversity quotient.

## 2. Objective

This instructional model aims to improve college students' adversity quotient included: control, ownership, reach, and endurance.

## 3. Learning processes

### Step 1: Emotionally driven problem definition

Teacher: Provides new knowledge topics and creates a free and safe learning environment. Listen to, accept, and clarify students' emotional expressions to help them understand their feelings.

Students: Feel free to express their feelings in the face of new knowledge. Students further define questions based on emotional expression to ensure clarity.

### Step 2: Problem Discussing

Teacher:

Presents and explains the problem to students

Supports students and create a good classroom learning atmosphere.

Attach importance to the establishment of teacher-student relationship. Students are encouraged to learn autonomously, meaningfully, experientially, and intuitively.

Students: Discuss the problem, explore what is known and would like to learn more about, focusing on the topic.

### Step 3: Planning and decision-making

Teacher: clarifies possible decisions.

Students: 1. plan initial decision-making.

1. decide which part of the responsibility to take to solve which part of the problem.

### Step 4: Action

Teacher: provides students with an environment of trust and love where students can learn freely. The teacher should be:

- Realness in the Facilitator of Learning. Shows the teacher's true feelings in front of students instead of creating a false teacher image.

- Prizing, Acceptance, Trust. Teacher attaches importance to students' feelings, accept students' emotions, and believe that students are trustworthy.

- Empathic Understanding. This attitude of standing in the other's shoes, of viewing the world through the student's eyes, is treasured in the classroom.

Students: gain further insight and develop more positive actions.

Action is to do something.

- What additional information do I need?
- What could I do to gain even a little control over this situation?
- What could I do to limit the reach of this adversity?
- What could I do to limit how long the adversity endures in its current state?

#### **Step 5: Evaluating and Feedback**

Teacher: respects and appreciates students' learning results, gives students timely feedback on learning, and encourages students to actively explore knowledge.

Students: self-assess their learning. Students assess for themselves whether they have mastered

- what they want to learn about the topic (Control)
- whether they have taken specific responsibility for overcoming adversity

(Ownership)

- whether they have applied new knowledge in their lives to help them grow (Reach)

- whether they have achieved their goals within the time limit (Endurance).

#### **4. Result**

Students improve their adversity quotient including control, ownership, reach, endurance.

This study systematically combs the concepts and theories of adversity quotient, Rogers' theory, instructional model, and mental health education course. On this basis, it innovatively combines the relevant contents of Rogers' theory and instructional model to build an instructional model for the mental health education course in the first year of college. which consisted of four components: principle, objective, learning process, and result. In addition, the instructional model has passed the Objective Coherence Index (IOC) test. The course consists of three modules with a total of 20 credit hours, including test anxiety, friendship conflict, and loneliness.

### Result of Part 3: The experimental and improvement of the instructional model based on Rogers' theory (OB3)

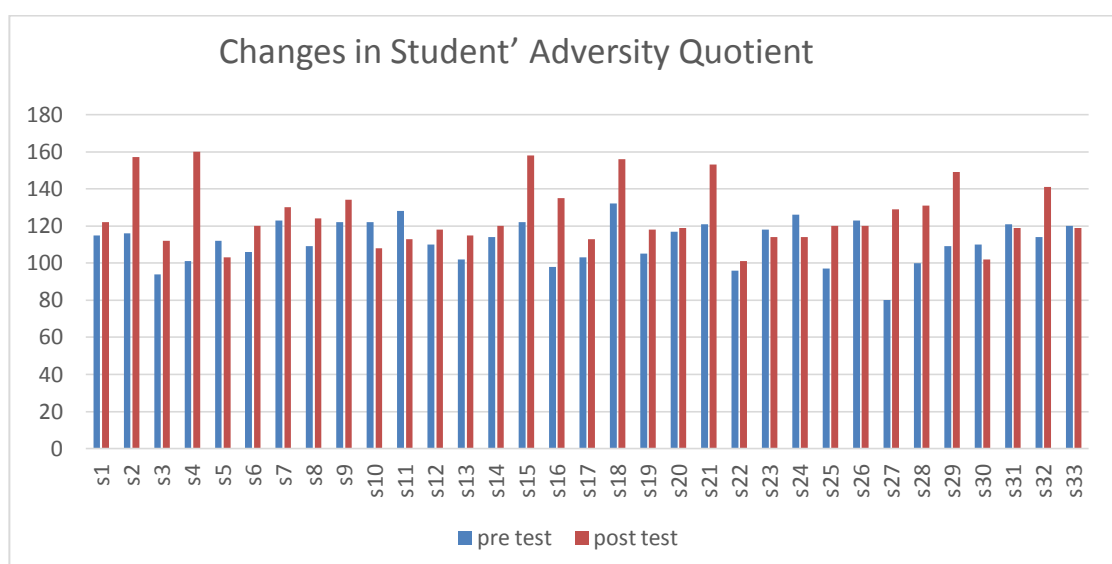
#### 1. Data analysis of pre-and post-test

This section compares students' adversity quotient before and after the experiment through dependent t-test for paired samples which provides information on whether the differences are significant before and after using the instructional model based on Rogers' theory.

**Table 4.4** Comparison of Students' adversity quotient pre-test and post-test mean scores

Adversity Quotient Scale	Score	n	$\bar{X}$	SD	t	df	p
Pre-test	200	33	111.70	11.58	4.23***	32	0.00
Post-test	200	33	125.67	16.91			

From Table 2, through the Paired Samples T-Test, it was clear that the students' post-test score ( $\bar{X}=125.67$ ,  $SD=16.91$ ) was significantly higher than the pre-test score ( $\bar{X}=111.70$ ,  $SD=11.58$ ,  $t=-4.23$ ,  $p < 0.001$ ) statistically significant at the .001 level. indicating that the students' adversity quotient was significantly improved through the instructional model based on Rogers' theory.



**Figures 4.1** Changes in Student' Adversity Quotient



Figure 1 shows that a total of 24 out of 33 students showed an improvement in the adversity quotient, more than two-thirds of the total. This shows that the adversity quotient teaching model based on Rogers' theory can effectively promote the learning and development of students' adversity quotient and achieve positive teaching results.

### 3. Findings from the Student Behavior Observations

To bolster the findings of the pretest and post-test analyses, the study also included qualitative observations of student behavior. Throughout the learning experiment, the researcher documented students' engagement, activities, and participation in various tasks. This involved closely observing students during each classroom session to gain insights into their learning behaviors.

**Table 4.5** Summary of Student Behavior Observation Form

Course name:	Learning process	Observation Notes
Lesson 1: test anxiety	Step 1: Emotionally driven problem definition	This step focused on expressing the student's emotions. The teacher initiated an activity called "Expressing Emotions through Art," in which both students and teachers depicted their feelings and emotions about test anxiety through free-form drawings. Student A: Actively participated in the activity of "Expressing Emotions through Art" and created a picture of the tortoise and the hare. Student B: Seems a little reserved and has difficulty expressing emotions through art. He prefers to observe other people's works before trying to create his own. The final picture is a lot of black spiral circles. These reflect their feelings about test anxiety. The initiative aimed to foster a supportive classroom environment and foster positive relationships between students and teachers. Through activities, students can more clearly recognize their emotional state, and provide cognitive basis for subsequent emotional control. In written expression, students are not only describing emotions, but also reflecting on themselves. This self-knowledge is the first step to increasing your sense of control. To establish autonomy of expression, students feel autonomy and responsibility in writing freely. They can choose the content and the way to express their emotions, and this choice cultivates their initiative and ownership in emotional expression.

Table 4.5 (Continued)

Course name:	Learning process	Observation Notes
	Step 2: Problem Discussing	<p>The point of that step was to facilitate discussion. The teacher arranged a "group discussion" session, dividing the students into groups of 5-6 people. Student A: She actively participated in the group discussion and shared her experience of exam anxiety. The anxiety before the test was like a running race between a tortoise and a rabbit. She always felt that she was "being chased by her peers" and discussed the common difficulties and reasons with her classmates. Student B: Seemed reluctant to participate in group discussions, more inclined to listen than to share personal experiences, but showed participation and agreement with the views of classmates. Through these sessions, teachers guided students to delve into personal experiences of test anxiety in groups, aiming to identify common difficulties as well as common causes.</p>
	Step 3: Planning and decision making	<p>This step can improve students' sense of control and make decisions about their own learning content and learning time, in that phase, the primary focus was on equipping students with the skills to utilize the LEAD Technique effectively and formulate rational weekly plans to address test anxiety. Teachers guided students through the LEAD Technique, ensuring comprehension of its key steps. Student C: Quickly grasped the concept of LEAD technology and confidently applied it to develop a detailed and practical personalized weekly plan to meet their individual needs and experiences with test anxiety. Student D: Needed more support in understanding LEAD technology, but actively participated in activities, demonstrated improved understanding and actively contributed to the development of their weekly plan. Students then applied this technique to develop personalized weekly plans tailored to manage their individual experiences of test anxiety. Through this process, students learned practical strategies for coping with stress while fostering a supportive classroom environment.</p>

Table 4.5 (Continued)

Course name:	Learning process	Observation Notes
	Step 4: Action	<p>In that phase, the focus shifted to taking concrete actions based on the previously devised plans. The teacher emphasized the importance of completing daily learning tasks as per the plan and encouraged students to set and pursue their goals diligently. Students, following their individual study and anxiety management plans, applied LEAD skills practically. They recorded their actions and encountered difficulties, which might have involved adhering to study schedules, seeking help, adjusting study methods, and prioritizing health.</p> <p>Student A: Carefully implement the personalized learning and anxiety management plan and record their actions and difficulties. Actively seeking help when needed and adapting study methods to fit the plan demonstrate a commitment to effectively dealing with test anxiety.</p> <p>Student B: Initially had some difficulty in following the study plan, but showed tenacity and determination to overcome the challenge. With the help of the teacher, make the necessary adjustments to improve coping strategies. By executing each step of their plans, students enhanced their ability to cope with test anxiety effectively, thereby limiting its negative impact on various aspects of their lives. The teacher underscored the need for timely feedback, urging students to regularly evaluate their progress and consider the efficacy of their plans. Teachers provided guidance and suggestions to help students address any challenges that arose.</p>
	Step 5: Evaluating and Feedback	<p>The focus lay on evaluating and providing feedback on the implementation of the previously devised plans. The teacher initiated a group discussion to encourage students to openly assess their actions from the previous stage. Students then engaged in self-evaluation of their learning plans and application of LEAD skills under the teacher's guidance, sharing their insights and feelings with the group. After the group sharing, the teacher offered individual feedback to students, emphasizing their growth in managing test anxiety and encouraging further plan optimization.</p> <p>Student A: Actively participating in group discussions, assessing their own behavior, and getting feedback from teachers, showing growth in</p>

Table 4.5 (Continued)

Course name:	Learning process	Observation Notes
		managing test anxiety. Students guided by feedback and group discussions, refined their study plans to address any identified deficiencies, thus enhancing their effectiveness in coping with test anxiety.
<b>Lesson 2:</b> <b>friendship</b> <b>conflict</b>	Step 1: Emotionally driven problem definition	This step focused on facilitating students to express their emotions. The teacher introduced the "Psychological Melodrama Expressing Emotions" activity, where students created situational dramas depicting friendship conflicts based on personal experiences. Student E: She enthusiastically participated in the activity and showed her conflicts with her good friends through the melodrama. In the group performance, she well showed the angry and quarreling scenes of classmates and shared them with each other. This activity fostered authentic sharing and supported students in exploring and articulating their feelings. It aimed to cultivate a supportive classroom environment and strengthen relationships between students and teachers.
	Step 2: Problem Discussing	This step aimed to facilitate discussions among students about friendship conflicts. Initially, students reflected on their feelings through the "Recording the Experience of Situational Drama" activity, documenting their emotions on paper. Subsequently, in small group discussions led by the teacher, students delved into their individual experiences of friendship conflicts, identifying common issues like avoidance, communication challenges, and misunderstandings. Student E: She actively participated in the group discussion, shared her feelings and opinions on friendship conflicts, and discussed solutions with her classmates. Student F: He listened carefully to the experiences of others in group discussions, discussed common problems, and put forward constructive opinions and suggestions. These discussions fostered a supportive environment, strengthening student relationships. The teacher encouraged analysis of shared experiences, pinpointing reasons for conflicts such as communication lapses and differing expectations. Finally, students collectively summarized conflict reasons and brainstormed solutions as a class.

Table 4.5 (Continued)

Course name:	Learning process	Observation Notes
	Step 3: Planning and decision making	<p>This step focused on planning and decision-making to address friendship conflicts. The teacher introduced students to the LEAD technique, emphasizing its role in navigating conflict. Students learned key steps in creating a friendship repair plan. The teacher guided students in developing personalized plans, which were then reviewed for effectiveness. Using the LEAD technique, the teacher ensured each student's plan was tailored to their unique situation.</p>
	Step 4: Action	<p>This step emphasized taking concrete actions to address friendship conflicts, following the previously devised plans. The teacher reminded students to apply LEAD skills and follow their study plans diligently. In summary, LEAD techniques provide students with an effective framework for addressing test anxiety, helping them understand and manage their emotions, and take positive action to overcome challenges.</p> <p>Listen: Students should first listen to their inner voices, recognizing the anxiety and pressure they feel regarding tests. By listening to their emotions, they can better understand the sources and manifestations of their anxiety.</p> <p>Explore: Students should explore the causes of their test anxiety. This may include concerns about test content, performance pressure, and worries about future outcomes. By exploring these reasons, they can gain a clearer understanding of the roots of their anxiety and take appropriate action.</p> <p>Analyze: During the analysis phase, students can examine their test anxiety and consider possible solutions. They can analyze the specific manifestations of their anxiety, such as physical reactions, thought patterns, and emotional changes, and seek effective strategies to address it.</p> <p>Do something: Finally, students need to take concrete actions to address test anxiety. This may include creating study plans, seeking help and support, using relaxation techniques, and adopting positive thinking patterns. By taking action, students can better control their anxiety and perform better in tests. Students tracked their actions and challenges, focusing on improving communication, conflict resolution, and honesty in their friendships. Student E: Carefully learned the LEAD</p>

Table 4.5 (Continued)

Course name:	Learning process	Observation Notes
	<p data-bbox="512 869 603 898">Step 5:</p> <p data-bbox="480 913 647 981">Evaluating and Feedback</p>	<p data-bbox="683 495 1398 853">skills, developed a friendship repair plan according to personal conditions, focused on communication methods, and adjusted and optimized the plan under the guidance of the teacher. By implementing each step of the plan, students enhanced their ability to manage conflicts effectively, minimizing negative impacts on their lives. The teacher underscored the importance of timely feedback, encouraging students to evaluate their progress regularly and seek guidance to overcome challenges.</p> <p data-bbox="683 869 1398 1361">This step focused on evaluating and providing feedback on friendship repair programs and the application of LEAD skills. Students engaged in group discussions to self-assess their progress and share their learnings with their peers. The teacher then provided feedback to each student, emphasizing their growth and effort in managing friendship conflicts. Students were encouraged to optimize their repair plans further and address any issues that arose based on the feedback received. Students E and F both actively participated in the group discussion, self-assessed their progress and shared their learning results with their classmates. Finally, students re-examined their plans and made adjustments as needed.</p>
<p data-bbox="300 1377 427 1444"><b>Lesson 3: Loneliness</b></p>	<p data-bbox="512 1377 603 1534">Step 1: Emotionally driven problem definition</p>	<p data-bbox="683 1377 1398 2036">This phase centered on students' emotional expression facilitated by the teacher through the "Role Play Experience Emotion" activity. Utilizing the empty chair technique, students delved into their inner feelings of loneliness, navigating the intricacies of their emotions. Student G: I was more cooperative in the activities of "role-playing and experiencing emotions". Under the guidance of the teacher, she used the empty chair technology to deeply explore her inner loneliness, and even left tears of sadness, showing her good emotional expression ability. In contrast, student H: She encountered difficulties in this activity. She may feel uncomfortable or unwilling to express her lonely feelings in front of so many people, and may need more time to adapt to this activity. The teacher provided guidance in elucidating the importance of these feelings, fostering an environment of authenticity and trust in the classroom.</p>

Table 4.5 (Continued)

Course name:	Learning process	Observation Notes
	Step 2: Problem Discussing	<p>This step focused on facilitating group discussions to address the issue. The teacher organized "group discussion" activities, dividing students into smaller groups to explore individual experiences of loneliness and common challenges. These sessions aimed to foster authentic discourse and build close relationships among students. Students shared their encounters with loneliness, discussing tendencies towards isolation, dependency on technology, and negative self-perceptions. Student G: I often feel lonely when I have a long vacation and do not have friends to accompany me. I really hope to have friends to talk about my loneliness and bitterness. Guided by the instructor, groups summarized their discussions, exploring attribution patterns, coping strategies, intimacy needs, and personal dispositions. Through these discussions, students gained a deeper understanding of the underlying causes of loneliness, leading to collaborative efforts to formulate solutions.</p>
	Step 3: Planning and decision making	<p>This step focused on introducing the LEAD Technology, emphasizing its significance in informed decision-making to address loneliness. Students attentively listened as the teacher introduced the LEAD Technology and learned about its fundamental steps for planning and decision-making in combating loneliness. Guided by the teacher, students crafted individualized plans to tackle loneliness based on their circumstances. They sought feedback from the teacher to assess the effectiveness, suitability, and specificity of their plans. Student J: listened intently to the teacher's introduction on LEAD skills, and worked hard to develop a personalized plan to deal with loneliness. Student I: I may be hesitant at this stage and need the teacher's guidance to further understand the application of LEAD skills. Applying the LEAD Technology, the teacher evaluated the appropriateness of each student's loneliness coping plan, recognizing the uniqueness of each student's approach.</p>
	Step 4: Action	<p>In this step, students shifted focus to implementing concrete actions outlined in their plans. The teacher stressed the completion of daily tasks and encouraged goal pursuit.</p>

Table 4.5 (Continued)

Course name:	Learning process	Observation Notes
	Step 5: Evaluating and Feedback	<p>Students applied LEAD skills practically, recording their actions and challenges. They engaged in tasks such as improving social skills, attending events, and seeking support. Student k: Actively participated in class tasks, worked hard to complete daily tasks, and sought more feedback from the teacher. The teacher emphasized prompt feedback and offered guidance to address emerging challenges.</p> <p>This step focused on evaluating and providing feedback on implemented loneliness coping programs and the application of LEAD skills. Students engaged in small group discussions to assess and offer feedback on their actions, sharing insights to facilitate mutual learning. Guided by the teacher, they self-assessed their learning plans and leadership skills, then shared their experiences with the team. Following group sharing, the teacher provided feedback to each student, emphasizing their growth and effort in coping with loneliness. Students were encouraged to further refine their coping plans and address any emerging issues. Student G: Participated in the group discussion more actively, evaluated their actions and shared their insights. She accepted the teacher's feedback and was willing to further refine her coping plan. Student H: Listened to the discussion more calmly, but may need extra encouragement from the teacher to accept the feedback and make improvements. Drawing from feedback and group discussions, students revisited their plans, making necessary adjustments for improvement.</p>

It can be seen from Table 4.5 that the instructional model based on Rogers' theory of adversity quotient enables students to learn independently in a free and safe learning environment. The instructional model designed according to students' common adversity situations can mobilize students' attention to the greatest extent and improve students' learning interest and motivation. Through learning, students' adversity quotient can be effectively improved, mainly in control, ownership, reach, and endurance four aspects.



#### 4. Findings from the Interview form for Teaching Opinions

The research results in this part are mainly based on Rogers' theory, and participants are interviewed through semi-structured interviews to understand students' views on the instructional model of adversity quotient. A total of 6 participants were interviewed.

**Table 4.6** Students' opinions on teaching

Interview Question	Record of Discussion
1. Do you feel your adversity quotient has improved?	1. 100% (6/6) of students said they felt their adversity quotient had improved. For example, Student A said that after learning the model, he found that he was more able to activate the adversity alarm in his brain in a timely manner, and that sensing adversity helped him use the LEAD technique more calmly to deal with adversity. Student B, on the other hand, believes that by learning to feel and accept emotions better, she can more easily plan how to deal with adversity, and ultimately improve her adversity quotient.
2. Which part of your teaching activity do you think will best improve your adversity quotient	2. Six students responded to the question which part of the teaching activity would most help improve your adversity quotient. Of these, 50% (3/6) of students found team discussions and problem-solving tasks to be most helpful in improving their adversity quotient. Student C said that these activities allowed him to learn to work with others and develop the ability to respond flexibly to challenges. In addition, 33.33% (2/6) of the students, students D and F, said that they liked painting and psychological drama in the teaching activities, and they thought such activities were very interesting, relaxing and pleasant. In addition, for the remaining 16.67% (1/6) students, Student G mentioned that he liked the planning part of the course, because it gave him the opportunity to delve into his own abilities and learn skills to deal with challenges. This will make him feel more confident and better able to resist adversity.
3. Do you apply what you have learned in class to your real life?	100% (6/6) of students said they applied what they learned in class to their real life. For example, student E said that she was able to use the relaxation and emotional regulation skills she learned in class to effectively relieve her anxiety when faced with the adversity of sudden illness. Other students shared similar experiences, believing that the skills and knowledge learned in

Table 4.6 (Continued)

Interview Question	Record of Discussion
4. What difficulties did you encounter in classroom learning activities? How did you solve them?	<p>the classroom have played a positive role in coping with various situations in their daily lives.</p> <p>Among them, 66.67% (4/6) of the students mentioned that they face difficulties in time management both in study and life, but by making plans, improving self-management skills and seeking help, they successfully solved the problem. Other students shared similar experiences, citing learning to self-regulate and deal with stress from adversity as important abilities. Student D said that when he encountered academic difficulties, he used to seek help from teachers or classmates, and solved the difficulties through good communication and cooperation. 33.33% (2/6) of the students think that they are not used to sharing their experiences and bad emotions too much in class. Student B said she prefers to listen to other people's stories.</p>
5. What part of the teaching content are you are most interested in, and why?	<p>5. When asked what they are most interested in in college life and why, 6 students participated in the answer. Among them, 83.33% (5/6) of students chose friendship conflict as their favorite topic. These students believe that understanding and dealing with friendship conflicts is an important issue in their college life and is important for personal growth and development. For example, Student A said that she had experienced friendship conflicts in her college life and wanted to learn how to effectively resolve these issues. Student E is also interested in friendship conflict and believes that resolving friendship conflict is essential to her relationships and mental health. In addition, 16.67% (1/6) of the students, student D is interested in the subject of test anxiety, she often feels nervous and pressure, and hopes to learn some ways to relieve anxiety.</p>
6. Do you like this instructional method? Do you like this course?	<p>6.100% (6/6) of students said they liked the interactive teaching method and enjoyed the course. For example, student E said that she particularly enjoyed the group discussion sessions in the course, because it helped her to exchange ideas with her classmates, think about problems from different angles, and enhance the learning effect.</p>

Table 4.6 shows that the adversity quotient teaching model based on Dorrogers' theory enables most students to experience a free and enjoyable learning process. However, in our in-depth interviews, we found that a small number of students did not significantly improve their adversity quotient, because they had a resistance to adversity, and did not really apply knowledge to life situations. Some students made plans, but did not actively complete them, but would lose their enthusiasm. In order to improve the situation, teachers also need to provide more follow-up tutoring and positive feedback to this small group of students.

## Chapter 5

# Conclusion Discussion and Recommendations

The research objectives were:

- 1) To study the current situation of adversity quotient development.
- 2) To develop an instructional model based on Rogers' theory.
- 3) To compare students' adversity quotient before and after using the instructional model based on Rogers' theory.

The population of this study were 104 freshmen of Infant and child care services and management major of Guangxi International Business Vocational College.

The research tools were:

- 1) questionnaire about the current situation and existing problems of the adversity quotient of college students.
- 2) interview form about the current situation and existing problems about the adversity quotient of college students.
- 3) lesson plans.
- 4) Adversity Quotient Scale.
- 5) observation form about student behavior.
- 6) interview form about opinions on teaching.

**The research steps were:**

This study was conducted in three steps: a study of a study about the current situation of adversity quotient development, the development of the instructional model, and an experimental improvement of the instructional model.

## Conclusion

**The results of the study are shown as follows:**

- 1) The current situation and existing problems of college students' adversity quotient include four aspects: (1) students (2) teachers (3) the learning process (4) environment. Among the current situation and understanding of the adversity quotient among college students, the most critical and urgent problem to be solved is the learning process, followed by students, the environment and finally teachers.

2) The instructional model based on Rogers' theory consists of four elements: (1) principle (2) objective (3) learning processes (4) result; The learning process consists of 5 steps: (1) emotionally driven problem definition (2) problem discussing (3) planning and decision making (4) action (5) evaluating and feedback.

3) Compared with the results of the post-test and pre-test, the adversity quotient of college students generally improved significantly. The experiment proves that the instructional model based on Rogers' theory can improve the adversity quotient of college students.

## Discussion

The analytical discussion of the study is divided into three parts, which are discussed in turn in this section:

### **1. Discussion on the current situation and existing problems of first-year college students' adversity quotient**

The findings of this study on the current situation and existing problems of first-year college students' adversity quotient show that: the worst factor in adversity quotient is the learning process, followed by the student factor, the environment factor, and the teacher factor ranking last.

The main challenge to improving college students' stress quotient level is the teaching process and teaching method. In the current adversity education of college students, the Ministry of Education has issued a guiding document on training and improving students' ability to cope with adversity. These guidelines encourage schools to pay attention to the adversity education of college students. Schools provide a lot of resources and help for students to learn adversity knowledge. Teachers also continuously improve their quality and actively participate in the learning and training of adversity knowledge. However, there are still many deficiencies in the teaching process. For example, Dai et al. (2012) believe that the teaching content of adversity quotient is not consistent with the actual situation of students, the teaching environment is not interesting enough, and the teaching focus is difficult to understand. These current conditions and problems need to be improved. Some researchers have proposed some good improvement methods, such as using appropriate teaching methods in the teaching process, paying attention to the arrangement of the difficulty level of teaching content in the teaching design,

focusing on cultivating students' self-learning ability and self-monitoring and promoting students to have a good learning attitude. Help students to master the knowledge of adversity quotient more consciously, more deeply, and more continuously, to obtain the satisfaction of self-realization, a sense of accomplishment, self-confidence, tenacious willpower, and finally improve the ability to cope with adversity.

Improving students' factors can also improve college students' adversity quotient, stimulate students' interest in adversity quotient, and improve students' awareness of the importance of adversity quotient, to stimulate students' active learning of adversity quotient knowledge. At the same time, students' psychological quality and self-confidence are very important to whether students can successfully overcome the challenges they encounter in learning (Sigit et al.,2019).

The comprehensive quality of teachers and the school environment are also very important to improve the adversity quotient of college students. The higher the professional status of the teacher, the higher the AQ, and the higher the student's learning independence. Teachers with high levels of AQ can enhance students' academic achievement, whereas low levels of psychological resilience in teachers are associated with lower student performance. Teachers need to possess qualities of resilience, diligence, and patience to elevate their professionalism in handling various learning challenges. They must exhibit enthusiasm, dedication, and innovation, be willing to explore new ideas, and have the ability to learn from their mistakes, thereby fostering a professional attitude toward their work (Saguni et al., 2021).

Therefore, the most important development of student adversity quotient needs to be the teaching process, and then to improve students' cognition of adversity quotient, enhance teachers' skills, and build school environment and resources.

## **2. Discussion on the development of instructional models**

This study systematically combs the concepts and theories of adversity quotient, Rogers' theory, instructional model, and mental health education course. On this basis, it innovatively combines the relevant contents of Rogers' theory and instructional model to build an instructional model for the mental health education course in the first year of college. which consisted of four components: principle, objective, learning process, and result. In addition, the instructional model has

passed the Objective Coherence Index (IOC) test. The course consists of three modules with a total of 20 credit hours, including test anxiety, friendship conflict, and loneliness.

The teaching of adversity quotient designed in this study is based on the adversity situations often encountered by college students in real life. After learning how to deal with adversity, students can apply it to all kinds of adversity in real life, and finally improve students' adversity quotient. The specific process is as follows: By creating a free and safe learning environment, psychology teachers can help students express their emotions and feelings freely(Williams & Williams, 2011). It can help students define and discuss problems. Then, the teacher introduced the LEAD skills of improving adversity quotient to the students and then guided the students to independently develop a plan to deal with adversity (Stoltz, 1997). Through continuous implementation, modification, and improvement of the plan, the final result was to solve difficulties, overcome adversity, and improve students' adversity quotient.

This study systematically combs the concepts and theories of adversity quotient, Roger's theory, instructional model, and mental health education curriculum. On this basis, we combine Roger's theory and instructional model to construct the instructional model for first-year adversity quotient, which includes four components: principle, goal, learning process and result. In addition, the instructional model has passed the Objective Coherence Index (IOC) test. The course consists of three units of 20 credit hours covering topics such as test anxiety, friendship conflict, and loneliness.

The adversity Quotient teaching designed in this study takes the common adversity situations of college students as the theme. In a safe and free teaching environment and with a harmonious and friendly relationship between teachers and students, interesting classroom interactive activities are used to attract students' interest in the adversity quotient and realize the importance of the adversity quotient for life development. It is designed to help them learn ways to cope with adversity and to apply what they have learned in real life. The specific process is that psychology teachers create a free and safe learning environment, encourage students to freely express their emotions and feelings, and better help them define and discuss problems. Then, the teacher introduced to improve the LEAD skills of

adversity leaders and guided the students to independently make plans to deal with adversity. Through continuous implementation, modification, and improvement of the plan, students are eventually able to solve difficulties, overcome adversity, and improve the adversity quotient (Neikirk et al., 2023).

### **3. Discussion on the effectiveness of the implementation of the instructional model**

After implementing the instructional model based on Rogers' theory, the adversity quotient of most of the 33 students improved. The experimental results show that the instructional model based on Rogers' theory can significantly improve the adversity quotient of students.

Rogers' theory emphasizes the importance of a free and safe learning environment, as well as a good teacher-student relationship, which is also helpful for students to calmly face difficulties. In the teaching of adversity quotient, improving the instructional model and teaching process is helpful for students to improve adversity quotient, which is similar to the study of Lardika and Tulyakul (2020). Septiana (2015) believes that teachers should pay attention to and take care of students in all groups regardless of their adversity quotient. The new teaching method designed by the author integrates adversity knowledge with students' real-life situations, encourages students to further understand the significance of learning adversity quotient knowledge, and enhances students' motivation to learn adversity quotient knowledge. Through the implementation of new teaching methods, it is proved that improving teaching methods can help students better cope with the difficulties encountered in school life, cultivate students' courage to cope with difficulties, and ultimately improve students' adversity quotient. During the teaching discussion and sharing of this study, students also expressed: We prefer the new learning process because in class, students can learn independently more easily and happily. When making learning plans, they can make plans for themselves according to their actual situation and expectations, without worrying about being criticized by teachers or questioned by classmates. This can promote self-discipline and self-drive to better cope with difficulties and improve adversity.



## Recommendations

**Based on the results of the study, it is recommended that:**

1) The research results show that among the current situation of college students' adversity quotient, the most important factor is the learning process. Schools and teachers should attach importance to the teaching design used in the teaching process, the difficulty of the content of adversity should be based on different backgrounds of different students to properly arrange a learning plan suitable for each student, add interesting teaching methods to attract students' interest, and combine the teaching theme with the adversity encountered by students in actual school life to make students pay attention to the knowledge point of adversity. Both the national and provincial levels attach great importance to the cultivation of students' ability to cope with difficulties. Therefore, teachers should be good at applying the environmental resources provided by the state and schools and using advanced science and technology to help improve the efficiency of students' learning about adversity.

2) Teachers can further study the instructional model based on Rogers' theory, and on the basis of creating a safe and free learning environment for students, with the goal of better improving students' adversity factors, use instructional models that are more suitable for students' psychological development and personal growth to scientifically cultivate students' ability to resist setbacks.

3) This study shows that the total score of adversity quotient of college students is significantly improved. Among the four dimensions of adversity quotient, endurance (statistically significant) improved the most. 0.001), followed by control (statistically significant  $p=0.001$ ), reach (statistically significant  $p=0.004$ ), and finally ownership (no statistically significant  $p=0.074$ ). The experiment proves that there is a big gap between the improvement of ownership and other dimensions. In order to better improve students' adversity factor and realize the joint improvement of all dimensions, it is suggested that teachers pay attention to the learning content of students' ownership, improve students' sense of responsibility in the face of difficulties and guide students to deal with adversity in a correct attribution way.

### **Future Researches**

1) The scope of this study's teaching experiment is confined to first-year college students, overlooking other demographics within the college population. Future inquiries could broaden their scope to encompass students across various academic years, genders, and geographic regions. Such diversification would offer insights into how distinct learning factors influence adversity quotient development among different student groups.

2) While this study yielded encouraging results regarding the impact of an instructional model grounded in Rogers' theory on college students' adversity quotient, it is essential to acknowledge its immediate focus without delving into potential delayed effects. Subsequent investigations could incorporate longitudinal studies to monitor and gather data on students engaged in the adversity quotient instructional model based on Rogers' theory over an extended period. This longitudinal approach would entail regular assessments of their adversity quotient progression, learning interest, prioritization of adversity quotient, and application of coping strategies. A comparative analysis against students who did not partake in the instructional model would elucidate the enduring influence of this approach on students' adversity quotient development and its potential positive effects on their long-term mental well-being.

3) To monitor and evaluate the learning trajectories of diverse student populations, future studies could devise comprehensive assessment tools grounded in Rogers' theory more precisely. These tools should encompass various facets of students' adversity quotient learning processes, including but not limited to their interest in learning, emphasis on adversity quotient, and applying coping skills. Ensuring the accessibility and simplicity of these assessment tools would facilitate their integration into educational settings, enabling educators and institutions to monitor students' progress effectively. Consequently, educators could provide tailored support, students could identify areas for improvement, and personalized learning plans could be devised to optimize individual learning journeys.

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## Appendices

## Appendix A

List of Specialists and Letters of Specialists Invitation  
for IOC Verification



## List of Specialists and Letters of Specialists Invitation for IOC Verification

Name of Experts	Position/Office
Asst. Prof. Dr. Patchareeporn Bangkeaw	Bansomdejchaopraya Rajabhat University
Assoc. Prof. Dr. Supranee Sirisawatchai	Bansomdejchaopraya Rajabhat University
Asst. Prof. Dr. Chalerm-sup Karanjakwut	Bansomdejchaopraya Rajabhat University
Prof. Shuyue Zhang	Guangxi Normal University

Z

Appendix B  
Official Letter

Ref. No. MHESI 0643.14/ 1526



Graduate School  
Bansomejchaopraya Rajabhat University  
1061 Itsarapap 15 Itsarapap Rd.  
Thonburi Bangkok 10600

20 December 2023

**Subject** Request for Research Tool Validation

**Dear** Assistant Professor Dr.Supranee Sirisawatchai

**Attachment** Validation sheets

Regarding the thesis entitled "The Development of an Instructional Model Based on Rogers' Theory to Enhance the Adversity Quotient for Guangxi International Business Vocational College" of **Ms.Sun Qin**, a Ph.D. student majoring in the Curriculum and Instruction Programme at Bansomejchaopraya Rajabhat University code number code number 6373103130, Thailand, under the supervision of Professor Dr.Bung - on Sereerat, Dr.Penporn Thongkamsuk, and Assistant Professor Dr.Saifon Songsiengchai will use the written instruments in the said research. Given the researcher would like your expertise to validate the attached instruments to qualify for conduction. Knowing your experience in the field of education, I would like to ask for your help validating the instrument before administering it to the study participants.

The thesis introduction, research objective, questionnaire, and interview are hereby attached. I will gladly hear your suggestions and comments for improving the instrument. Your positive response is highly appreciated. Please check IOC processing and return all files to the researcher after 30 days of your finishing validation sheets.

Sincerely,

(Assistant Professor Dr.Kanakorn Sawangcharoen)  
Dean of Graduate School  
Bansomejchaopraya Rajabhat University

Tel. (662) 4737000 Ext.  
Fax. (662) 4737000

Ref. No. MHESI 0643.14/1527



Graduate School  
Bansomdejchaopraya Rajabhat University  
1061 Itsarapap 15 Itsarapap Rd.  
Thonburi Bangkok 10600

20 December 2023

**Subject** Request for Research Tool Validation

**Dear** Assistant Professor Dr.Patchareeporn Bangkeaw

**Attachment** Validation sheets

Regarding the thesis entitled "The Development of an Instructional Model Based on Rogers' Theory to Enhance the Adversity Quotient for Guangxi International Business Vocational College" of **Ms.Sun Qin**, a Ph.D. student majoring in the Curriculum and Instruction Programme at Bansomdejchaopraya Rajabhat University code number code number 6373103130, Thailand, under the supervision of Professor Dr.Bung - on Sereerat, Dr.Penporn Thongkamsuk, and Assistant Professor Dr.Saifon Songsiengchai will use the written instruments in the said research. Given the researcher would like your expertise to validate the attached instruments to qualify for conduction. Knowing your experience in the field of education, I would like to ask for your help validating the instrument before administering it to the study participants.

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Sincerely,

(Assistant Professor Dr.Kanakorn Sawangcharoen)  
Dean of Graduate School  
Bansomdejchaopraya Rajabhat University

Tel. (662) 4737000 Ext.  
Fax. (662) 4737000

Ref. No. MHESI 0643.14/1528



Graduate School  
Bansomejchaopraya Rajabhat University  
1061 Itsarapap 15 Itsarapap Rd.  
Thonburi Bangkok 10600

20 December 2023

**Subject** Request for Research Tool Validation

**Dear** Assistant Professor Dr.Chalerm-sup Karanjakwut

**Attachment** Validation sheets

Regarding the thesis entitled "The Development of an Instructional Model Based on Rogers' Theory to Enhance the Adversity Quotient for Guangxi International Business Vocational College" of **Ms.Sun Qin**, a Ph.D. student majoring in the Curriculum and Instruction Programme at Bansomejchaopraya Rajabhat University code number code number 6373103130, Thailand, under the supervision of Professor Dr.Bung - on Sereerat, Dr.Penporn Thongkamsuk, and Assistant Professor Dr.Saifon Songsiengchai will use the written instruments in the said research. Given the researcher would like your expertise to validate the attached instruments to qualify for conduction. Knowing your experience in the field of education, I would like to ask for your help validating the instrument before administering it to the study participants.

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Ref. No. MHESI 0643.14/1529



Graduate School  
Bansomdejchaopraya Rajabhat University  
1061 Itsarapap 15 Itsarapap Rd.  
Thonburi Bangkok 10600

20 December 2023

**Subject** Request for Research Tool Validation

**Dear**

**Attachment** Validation sheets

Regarding the thesis entitled "The Development of an Instructional Model Based on Rogers' Theory to Enhance the Adversity Quotient for Guangxi International Business Vocational College" of **Ms.Sun Qin**, a Ph.D. student majoring in the Curriculum and Instruction Programme at Bansomdejchaopraya Rajabhat University code number code number 6373103130, Thailand, under the supervision of Professor Dr.Bung - on Sereerat, Dr.Penporn Thongkamsuk, and Assistant Professor Dr.Saifon Songsiengchai will use the written instruments in the said research. Given the researcher would like your expertise to validate the attached instruments to qualify for conduction. Knowing your experience in the field of education, I would like to ask for your help validating the instrument before administering it to the study participants.

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(Assistant Professor Dr.Kanakorn Sawangcharoen)  
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Fax. (662) 4737000

Ref. No. MHESI 0643.14/ 1530



Graduate School  
Bansomdejchaopraya Rajabhat University  
1061 Itsarapap 15 Itsarapap Rd.  
Thonburi Bangkok 10600

20 December 2023

**Subject** Request for Research Tool Validation

**Dear**

**Attachment** Validation sheets

Regarding the thesis entitled "The Development of an Instructional Model Based on Rogers' Theory to Enhance the Adversity Quotient for Guangxi International Business Vocational College" of **Ms.Sun Qin**, a Ph.D. student majoring in the Curriculum and Instruction Programme at Bansomdejchaopraya Rajabhat University code number code number 6373103130, Thailand, under the supervision of Professor Dr.Bung - on Sereerat, Dr.Penporn Thongkamsuk, and Assistant Professor Dr.Saifon Songsiengchai will use the written instruments in the said research. Given the researcher would like your expertise to validate the attached instruments to qualify for conduction. Knowing your experience in the field of education, I would like to ask for your help validating the instrument before administering it to the study participants.

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Dean of Graduate School  
Bansomdejchaopraya Rajabhat University

Tel. (662) 4737000 Ext.  
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Appendix C  
Research Instrument



## Assessment Form for Validity of Instructional Model

**Research Title:** The Development of an Instructional Model Based on Rogers' Theory to Enhance the Adversity Quotient for Guangxi International Business Vocational College

**Research Objectives:**

To study the survey of factors affecting college students' adversity quotient.

2. To develop an instructional model based on Rogers' theory.

3. To compare the adversity quotient of college students before and after using the instructional model based on Rogers' theory.

**Directions:**

Please assess the consistency between the components of the instructional model based on Rogers' theory and the appropriateness of the instructional model by putting  $\checkmark$  it in the box according to the following criteria.

The rating is +1. There is an opinion that "Corresponds to definition."

The rating is 0. There is an opinion that "Not sure it corresponds to definition."

The rating is -1. There is an opinion that "Inconsistent with definition."

No.	Contents	Assessment result			Remarks
		-1	0	+1	
1	Principle				
2	Objective				
3	Learning processes				
4	Result				

Suggestions

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.....

.....

Sign..... Assessor

(.....)

Date...../...../.....

## Questionnaire about the current situation and existing problems of the adversity quotient of college student

### Direction:

1. This questionnaire is part of the research on " The Development of an Instructional Model Based on Rogers' Theory to Enhance the Adversity Quotient for Guangxi International Business Vocational College ", which aims to study the current situation and existing problems of college students' adversity quotient.

2. This questionnaire is anonymous, which will take you about 5-10 minutes. Please read the topic carefully and fill it out according to your actual situation. Hope to get your true thoughts, thank you for your support and cooperation.

### Part 1 Information on the identity of the interviewees

#### 1. Gender

1) Male 2) Female

#### 2. Age

1) 30-39 years old 2) 40-49 years old 3) 50-59 years old 4) 60 years old or above

#### 3. Highest education

1) Master's degree 2) Doctoral degree

#### 4. Title:

1)intermediate title 2)deputy senior title 3) senior title

#### 4. Working experience

1) 1-5 years 2)6-10 years 3) More than 10 years

Part2 the current situation and existing problems of the adversity quotient of college student

**Direction:**

Please read the following items carefully and select the extent to the current situation and existing problems of the adversity quotient of college students based on your actual situation and experience. Rating Scale of Likert Scale 5 level (1= strongly disagree, 2= disagree, 3= unsure, 4=agree, 5= strongly agree, please put the appropriate  $\checkmark$  in each line.)

Factor	Questions	Level					Remarks
		1	2	3	4	5	
Student	1) Student are interested in learning adversity quotient.						
	2)Students think that it is very important for them to master a certain knowledge of adversity quotient.						
	3)Students are willing to spend time learning about adversity quotient.						
	4)Students have various ways to gain knowledge of adversity quotient.						
	5)Compared with modern skills, students are more willing to learn adversity quotient -related skills.						
Teacher	1)The teacher believes that increasing the adversity quotient is important for personal development and self-actualization.						
	2)Teachers emphasize the importance of understanding knowledge about adversity quotient with students.						
	3)Teachers ask the students to learn about how to enhance the adversity quotient.						
	4)Teachers are willing to offer and teach students the adversity quotient knowledge.						

Factor	Questions	Level					Remarks
		1	2	3	4	5	
	5)Teachers can have easy access to teaching resources related to adversity quotient.						
Learning process	1)Teachers create safe learning situations so that students can learn in a relaxed atmosphere.						
	2)The teaching methods and strategies adopted by the teacher are effective and make full use of various teaching resources and methods.						
	3) The classroom is dynamic and interactive.						
	4)The teacher's assessment of students' ability to learn is accurate and timely, and feedback is specific and helpful.						
	5)The content of the mathematics classroom is closely related to real life and is interesting.						
Environment	1)School has done a good job of promoting the adversity quotient knowledge.						
	2)School has created a safe and supportive teaching environment helps students to learn the adversity quotient independently.						
	3)School attaches great importance to educating students about the adversity quotient.						
	4) School will incorporate the knowledge of adversity quotient of students into the students' comprehensive performance assessment.						
	5)You think that too much emphasis on professional academic achievement will reduce students' focus on improving adversity quotient						

## Assessment form for validity of the current situation and existing problems of the adversity quotient of college student

**Research Title:** The Development of an Instructional Model Based on Rogers' Theory to Enhance the Adversity Quotient for Guangxi International Business Vocational College

**Research Objectives:**

1. To study the current situation and existing problems of the adversity quotient of college students, and the factors influencing the adversity quotient of college student heritage.
2. To Develop an instructional model based on Rogers' theory to enhance the students' adversity quotient.
3. To compare undergraduate students' adversity quotient before and after teaching.

**Assessor:** ..... **Position:** .....

**Workplace:** .....

**Directions:**

When using the questionnaire, please consider the consistency of the questionnaire about whether each of the current situations and existing problems of students' adversity quotient is correct. After considering it, please check in the corresponding box. Use the following criteria for consideration.

The rating is +1. There is an opinion that "Corresponds to definition."

The rating is 0. There is an opinion that "Not sure it corresponds to definition."

The rating is -1. There is an opinion that "Inconsistent with definition."

Factors	Questions	Assessment result			Remarks
		-1	0	+1	
Student	1) Student are interested in learning adversity quotient.				
	2)Students think that it is very important for them to master a certain knowledge of adversity quotient.				
	3)Students are willing to spend time learning about adversity quotient.				
	4)Students have various ways to gain knowledge of adversity quotient.				
	5)Compared with modern skills, students are more willing to learn adversity quotient related skills.				
Teacher	1)The teacher believes that increasing the adversity quotient is important for personal development and self-actualization.				
	2)Teachers emphasize the importance of understanding knowledge about adversity quotient with students.				
	3)Teachers ask the students to learn about how to enhance the adversity quotient.				
	4)Teachers are willing to offer and teach students the adversity quotient knowledge.				
	5)Teachers can have easy access to teaching resources related to adversity quotient.				
Learning process	1)Teachers create safe learning situations so that students can learn in a relaxed atmosphere.				
	2)The teaching methods and strategies adopted by the teacher are effective and make full use of various teaching resources and methods.				
	3) The classroom is dynamic and interactive.				
	4)The teacher's assessment of students' ability to learn is accurate and timely, and feedback is specific and helpful.				
	5)The content of the mathematics classroom is closely related to real life and is interesting.				
Environment	1)School has done a good job of promoting the adversity quotient knowledge.				

Factors	Questions	Assessment result			Remarks
		-1	0	+1	
	2)School has created a safe and supportive teaching environment helps students to learn the adversity quotient independently.				
	3)School attaches great importance to educating students about the adversity quotient.				
	4) School will incorporate the knowledge of adversity quotient of students into the students' comprehensive performance assessment.				
	5)You think that too much emphasis on professional academic achievement will reduce students' focus on improving adversity quotient				

**Suggestions**

.....  
 .....  
 .....

Sign..... Assessor

(.....)

Date...../...../.....



**Interview form about the current situation and existing problems  
regarding the adversity quotient of college student**

1. This interview is a vital component of our research project titled " The Development of an Instructional Model Based on Rogers' Theory to Enhance the Adversity Quotient for Guangxi International Business Vocational College ", which aims to study the current situation and existing problems regarding the adversity quotient of a college student.

The information gathered from each respondent is treated with the utmost confidentiality, and the researcher assures that your responses will have no impact on either the institution or you personally. We kindly request that you respond truthfully based on your actual experiences and teaching background. The estimated duration of this interview is 15-30 minutes.

**Name:** ..... **Gender:** .....

**Position/Role:**..... **School/Institution Name:**.....

1. What are the current situation and existing problems with students' adversity quotient?
2. Why do college students' adversity quotient have these current situations and problems?
3. How to improve the adversity quotient of college students?

**Assessment of the validity of the Interview Schedule of the current situation and existing problems regarding the adversity quotient of college student**

**Research Title:** The Development of an Instructional Model Based on Rogers' Theory to Enhance the Adversity Quotient for Guangxi International Business Vocational College

**Research Objectives:**

1. To study the current situation and existing problems of the adversity quotient of college students, and the factors influencing the adversity quotient of college student heritage.
2. To Develop an instructional model based on Rogers' theory to enhance the students' adversity quotient.
3. To compare undergraduate students' adversity quotient before and after teaching.

**Directions:**

When using the interview, please consider the consistency of the interview about whether each of the current situations and existing problems of students' adversity quotient is correct. After considering it, please check in the corresponding box. Use the following criteria for consideration.

The rating is +1. There is an opinion that "Corresponds to definition."

The rating is 0. There is an opinion that "Not sure it corresponds to definition."

The rating is -1. There is an opinion that is "inconsistent with definition."

No.	Questions	Assessment result			Remarks
		-1	0	+1	
1	What are the current situation and existing problems about students' adversity quotient in each issue . Which issue is most importance?  1) instructional model  2) Teacher experiences and learning process  3) Media learning and resources  4) Student interest and motivation  5) Other factors				
2	How to solve these problems ?				
3	How to improve the adversity quotient of college students ?				

**Suggestions**

.....

.....

.....

Sign..... Assessor

(.....)

Date...../...../.....

## Lesson plans 1

**Course name: test anxiety**

**Time: 450mins**

### 1. Concept

Test anxiety is a complex emotional reaction in which the cognitive response, physiological arousal, and behavioral performance of an individual in the stages of test preparation, participation, and feedback interact with each other. When facing the exam or evaluation situation, some students show excessive worry, irrelevant thinking, psychological confusion, tension, and corresponding physiological arousal.

It is of great significance for students to cope with test anxiety effectively to improve their adversity quotient. This includes: knowing the emotional reaction of test anxiety, understanding the causes of test anxiety, and mastering the coping methods of test anxiety.

### 2. Contents

- 1) Emotional reactions to test anxiety
- 2) Experience and causes of test anxiety
- 3) techniques LEAD to cope with test anxiety

### 3. object

- 1) Students can control their emotions under test anxiety, maintaining calmness and rationality.
- 2) Students can take ownership of their responsibility for test anxiety and demonstrate initiative in problem-solving.
- 3) Students can reach a limitation on the impact of test anxiety, formulate reasonable study plans, and take proactive actions to reduce the influence of test anxiety on other aspects of life.
- 4) Students can endurance and limit the persistence of the impact of test anxiety, not letting it affect them for an extended period.

### 4. Learning processes

#### Step 1: Emotionally driven problem definition

##### Teacher:

Create a relaxed, welcoming atmosphere for students at the beginning of the class.

Guide students to express their emotions through open-ended questions.

The teacher first introduced the students to the most common adversity: test anxiety. It also explains the importance of solving students' exam anxiety for their personal growth.

- *The teacher organized "Draw pictures to express emotions" activity:*

The teacher provided the students with colored pens and white paper.

The teacher leads the students to think: How do you feel when you experience test anxiety? Draw a picture of how you feel.

(Make sure the questions are stimulating and lead students to think deeply)

Student: Use colored pens and white paper to draw freely. Some students can perfectly draw a finished picture, such as a billowing sea, a grass with dew, a pot on fire, and so on. Some students can't draw very well, maybe they draw a black jumbled line, a simple curve, or even a blank piece of paper. The teacher did not evaluate the quality of the drawing but guided the students to tell: why the drawing, what is the meaning of the drawing, what content shows, and how it relates to emotions.

The teacher also draws pictures and shows them to the students.

Share some of the teachers' own feelings about facing exams as students, Shows the teacher's true feelings in front of students instead of creating a false teacher image.

**Students:**

students express their emotions of test anxiety without worrying about grammar or structure.

**Teacher:**

Teacher attaches importance to students' feelings, accept students' emotions, and believe that students are trustworthy. Students are encouraged to pay attention to detail when expressing emotions, including physical feelings, mental states, etc. This contributes to a fuller understanding of emotional experience.

- *Teachers organize "Pictures into words" activities:*

The teacher encouraged the students to write out their true feelings with pen and paper.

**Students:**

Students think about their feelings about test anxiety based on the pictures they have drawn, and then write down their details with paper and pen. Students record their feelings in detail, including the intensity of the emotion, the duration, whether there was a physical reaction, etc.

**Teacher:** Empathic understanding, standing in the student's shoes and seeing the world through the student's eyes.

### **Step 2: Problem Discussing**

**Teacher:**

- *The teacher organized "group discussion" activities:*

Teacher divided the students into groups of 5-6. Teacher guide students to discuss each person's experience of test anxiety in small groups to identify common problems. Group discussions ensure that members of each group have a chance to share and listen. The classroom is an open space where teachers and students work together to create a supportive environment, which helps build closer student relationships and leads to more authentic discussions.

**Students:** Share their own experiences with test stress. This often includes situations where students are so nervous that they lose focus in class or revision, affecting their learning efficiency. Students are sacrificing study time for other subjects in order to prepare for the subjects that need to be tested recently, leading to increased anxiety among students before other subjects. The students' review for a long time led to lack of sleep, decreased mental state, bad mood and memory loss the next day.

**Teacher:**

Encourage group members to use written form to summarize their shared experiences and put together a list of reasons for test anxiety. There are often problems with poor time management, lack of confidence, or poor understanding of knowledge points.

**Students:**

In the group, summarize the reasons for your stress.

**Teacher:**

Encourage each group to share its own learning results with the whole class, and help students comb through the learning results of the whole class. And continue to encourage students to discuss solutions to problems.

### **Step 3: Planning and decision making**

**Teacher:**

Introduction to the LEAD Technique: The teacher introduces the LEAD technique to the students, emphasizing that making informed action decisions is essential for coping with the stress of the test.

**Students:**

Students listen to the teacher introduce the LEAD technique and learn about the key steps in making learning plans and decisions.

**Teacher:**

Teachers guide students to make a plan for a week to deal with test anxiety according to their actual situation.

**Students:**

Students make a weekly plan and then ask the teacher if the plan is valid, appropriate, and targeted.

**Teacher:**

According to the LEAD technique, check whether the student's weekly plan is suitable for the student. Each student's plan is unique.

**Step 4: Action****Teacher:**

The teacher reminded the students to complete their daily learning tasks according to the plan, set goals and work hard to achieve them.

**Student:**

Following students' own study plans and plans for dealing with test anxiety, students put LEAD skills into practice. Follow the study plan and record actual actions and difficulties encountered. This may include following an established study schedule, asking for help, adjusting revision methods, paying attention to health, etc. Students put each step of the plan into practice to improve the effectiveness of students dealing with test anxiety. Specific study plans can limit the negative impact of test anxiety on other aspects of students' lives.

**Teacher:**

The teacher stressed the importance of timely feedback after an action. Students should regularly check their progress and think about whether their plans are working. Teachers can offer some suggestions to help students better cope with possible problems.

**Step 5: Evaluating and Feedback****Teacher:**

The teacher organizes a group discussion with the students to discuss the implementation of the actions of the students in the previous stage, and encourages the students to openly share their assessment and feedback.

**Student:**

Students self-evaluate their learning plans and application of LEAD skills under the guidance of the teacher. Then share what you've learned and how you feel with the group.

**Teacher:**

After the group sharing, the teacher gives feedback to the individual students. Emphasize the growth and effort of each student in coping with test anxiety. The teacher encourages students to further optimize their learning plan and solve possible problems.

**Student:**

Based on feedback and group sharing, students can re-examine their study plan and make adjustments to any deficiencies.

**5. Learning resources**

- 1) Textbooks of *Mental health education courses for college students*
- 2) Teaching lesson plans
- 3) multimedia
- 4) paper and pen
- 5) Recommended reading:  
*Adversity quotient turning obstacles into opportunities*  
*Adversity Quotient @ Work*  
*What Life should Mean to You*  
*Thank You for Your Imperfections*

**6. Evaluation**

- 1) Observe students' behaviors to improve their test anxiety.
- 2) Evaluate students' learning outcomes in various dimensions of adversity quotient.



## Lesson plans 2

**Course name: friendship conflict**

**Time: 450mins**

### **1. Concept**

Friendship conflict refers to the tension and confrontation process caused by interest relationship, differences of opinions, personality differences and other factors in friendship. This kind of conflict often appears frequently in the interpersonal communication of college students, involving the dispute and contradiction between the two sides of the friendship, is a common interpersonal communication problem.

It is important for college students to deal with friendship conflicts effectively, which helps to improve their adversity quotient. This includes understanding the emotional response to friendship conflict, understanding the causes of friendship conflict, and mastering ways to resolve friendship conflict.

### **2. Contents**

- 1) Emotional reactions to friendship conflicts
- 2) Experience and causes of friendship conflicts
- 3) techniques LEAD to cope with friendship conflicts

### **3. object**

1) Students can control their emotions under friendship conflicts, maintaining calmness and rationality.

2) Students can take ownership of their responsibility for friendship conflicts and demonstrate initiative to solve the conflict.

3) Students can reach a limitation on the impact of friendship conflicts, develop a reasonable friendship repair plan, take proactive actions to reduce the influence of friendship conflicts on other aspects of life.

4) Student can endurance and limit the persistence of the impact of friendship conflicts, not letting it affect them for an extended period.

### **4. Learning processes**

#### **Step 1: Emotionally driven problem definition**

##### **Teacher:**

Create a relaxed and welcoming atmosphere for students at the beginning of the course.

Students are guided to express their emotions through open-ended questions.

The teacher first introduced the students to a common adversity: friendship conflict. It also illustrates the importance of resolving friendship conflicts for the need for love and belonging.

- The teacher organized the activity of "Psychological melodrama expressing emotions":

The teacher provided a stage for the students to show their performances.

The teacher divided the students into groups of five and asked them to design a situational drama on the theme of friendship conflict.

**Students:**

Discuss the plot of friendship conflict in the group, show the plot of friendship conflict that you have experienced according to your own experience. This includes a fight between a student and a close friend over an important item. Or because of misunderstandings or difficulties in communication, students do not talk to their good friends. Or the friend feels that the other partner is too dependent and does not give themselves enough independence and freedom. students design the script and lines of the situational drama. All five panelists participate in a friendship conflict scenario.

**Teacher:**

Guide the other students to think: What emotions do you feel when you see students from other groups acting out situational dramas about friendship conflicts?

Teachers share their own perceptions with the students, showing the true feelings of the teacher in front of the students, rather than creating a false image of the teacher.

**Student:**

Students express their friendship conflict emotions without worrying about grammar or structure.

**Teacher:**

Teachers attach importance to students' feelings, accept students' emotions, and believe that students are trustworthy. Students are encouraged to pay attention to details when expressing emotions, including physical feelings, mental states, etc. This contributes to a fuller understanding of emotional experience.

**Step 2: Problem Discussing**

**Teacher:**

- Teacher organizes the activity of "Recording the experience of situational drama" :

**Student:**

Students write down their true feelings about friendship conflicts with pen and paper.

Students think about their feelings about the friendship conflict based on the melodrama they have just performed (when they do at step 1) and watched the other group members perform. Then they write down the details with a pen and paper. Students record their feelings in detail, including the intensity of their emotions, their duration, and whether there is a physical response.

**Teacher:**

- Teacher organizes "group discussion" activities:

The teacher leads small groups of students to discuss each person's experience of friendship conflict to identify common problems. The teacher shared some of his own emotional feelings as a student when he faced a conflict with his best friend. Group discussions ensure that members of each group have the opportunity to share and listen. The classroom is an open space where teachers and students work together to create a supportive environment, which helps build closer student relationships and lead to more authentic discussions.

**Student:** share their experiences in dealing with friendship conflicts with their classmates. This often involves avoiding real conflicts and not knowing how to communicate, which can cause two friends to drift apart. Some students find a third party to talk, or help communicate, but there will also be misunderstandings in communication. Some students quarrel or even fight directly with their friends.

**Teacher:**

Encourage group members to use written summaries of their shared experiences and list reasons for friendship conflicts. Often there is a lack of communication, emotional instability, different expectations of friendship, personality differences and other issues.

**Student:**

In the group, summarize the reasons for the friendship conflict. share their learning with the class, discuss solutions to problems.

**Step 3: Planning and decision making**

**Teacher:**

The teacher introduces students to how the LEAD technology can be used to break through the adversity of friendship conflict, emphasizing that making informed action decisions is essential to dealing with friendship conflict.

**Student:**

Students listen to how the LEAD technology can be used on the opposite side of a friendship conflict and learn the key steps to making a plan and decision to repair a friendship.

**Teacher:**

The teacher guides the students to develop a plan for dealing with friendship conflicts according to their actual situation.

**Student:**

Students develop a friendship repair plan and then ask the teacher if the plan is effective, appropriate, and targeted.

**Teacher:**

Check that the student's repair friendship plan is appropriate for the student based on the LEAD technology. Each student's plan is unique.

**Step 4: Action****Teacher:**

Remind students to respond to friendship conflicts according to study plans and plans to put LEAD skills into practice.

**Student:**

Follow the friendship repair plan and keep track of their actions and difficulties. Students complete tasks on their own schedule, set goals and work towards them. This may include improving the way students communicate with their friends, staying out of conflict, avoiding escalation, sharing their true thoughts honestly, and discussing together how close and independent they want to be. Students are encouraged to put each step of the plan into practice to improve the effectiveness of dealing with friendship conflicts. The practice of specific friendship repair programs can limit the negative impact of friendship conflicts on other aspects of students' lives.

**Teacher:**

The teacher stressed the importance of prompt feedback after action. Students should regularly check their progress and think about whether their plans are working. Teachers can make some suggestions to help students better cope with the problems that may arise.

**Step 5: Evaluating and Feedback**

**Student:**

Group discussions are conducted in which students self-evaluate their friendship repair programs and the application of LEAD skills. Then share what they have learned and how they feel with the team.

**Teacher:**

After the group sharing, the teacher gives feedback to each student. Emphasize the growth and effort of each student in dealing with friendship conflicts. Students are encouraged to further optimize their plans for repairing and developing friendships and to address problems that may arise.

**Student:**

Based on feedback and group sharing, students can re-examine their own plans for friendship repair and development and make adjustments for shortcomings.

**5. Learning resources**

- 1) College students' mental health education course materials
- 2) Teaching lesson plans
- 3) Stage
- 4) Simple situational props
- 5) Pen and paper
- 6) Recommended reading:  
*Nonviolent Communication*  
*How to Win Friends and Influence People*

**6. Evaluation**

- 1) Observe students' behaviors to improve their friendship conflicts.
- 2) Evaluate students' learning outcomes in various dimensions of adversity quotient.

## Lesson plans 3

**Course name: Loneliness**

**Time: 300mins**

### **1. Concept**

Loneliness refers to the negative emotional experience of college students when there is a gap between the expected social relationship and the reality. It is of great significance for students to deal with exam anxiety and loneliness effectively to improve students' inverse quotient. This includes understanding the emotional responses associated with loneliness, understanding the causes of loneliness, and mastering ways to cope with loneliness.

### **2. Content**

- 1) Emotional responses related to loneliness
- 2) Experience and causes of loneliness
- 3) Skills for dealing with loneliness

### **3. Objects**

- 1) When students feel lonely, they can control their emotions and avoid indulging in bad emotional feelings.
- 2) Students can take responsibility for feeling lonely and show initiative to solve problems.
- 3) Students can limit the impact of loneliness, develop reasonable plans to improve loneliness, and take positive actions to reduce the impact of loneliness on other aspects of their lives.
- 4) Students are able to tolerate and limit the duration of the effects of loneliness so that it does not affect them for a long time.

### **4. Learning process**

#### **Step 1: Emotionally driven problem definition**

##### **Teacher:**

Create a relaxed and welcoming atmosphere for students at the beginning of the course.

Students are guided to express their emotions through open-ended questions.

The teacher first introduces the students to a common adversity: loneliness. It also shows that loneliness is a common emotional feeling experienced by people. If college students are in such negative emotions for a long time, they are likely to cause some emotional disorders, which is not conducive to physical and mental development. Solving students' loneliness is very important for personal growth.

- The teacher organized a "role play experience emotion" activity:

The teacher provides the students with empty chairs. The teacher explained to the students how to use the empty chair technique: By using the empty chair to represent their inner lonely self, the students can play two roles: one is themselves, and the other is a part of their loneliness. Students engage in a dialogue between two "roles" to gain a deeper understanding of the sources and feelings of loneliness.

**Student:** Use empty chairs for role play. Some students perfectly experience feelings of their other selves, which often include: a desire for connection and social connection with others, feelings of alienation or isolation from others, feelings of helplessness, lack of control, frustration, and low self-esteem. Some students received the effect is not very good, perhaps no special feelings. The teacher did not evaluate the good or bad of the student's harvest, but guided the student to tell: why there are such feelings, what is the meaning of such feelings, what content is expressed, and what is the relationship with emotion.

**Teacher:** shares some of the teacher's own feelings of facing loneliness as a student, showing the true feelings of the teacher in front of the students, rather than creating a false image of the teacher.

**Student:**

Students express their feelings of loneliness without worrying about grammar or structure.

**Teacher:**

Teacher attaches importance to students' feelings, accept students' emotions, and believe that students are trustworthy. Students are encouraged to pay attention to details when expressing emotions, including physical feelings, mental states, etc. This contributes to a fuller understanding of emotional experience.

- **Teacher** organizes "Writing experience" activities:

The teacher encouraged the students to write down their true feelings with pen and paper.

**Student:**

Students think about their feelings of loneliness based on their experience of just having a conversation with an empty chair, and then write down the details with a pen and paper. Students record their feelings in detail, including the intensity of their emotions, their duration, and whether there is a physical response.

## **Step 2: Discuss the problem**

### **Teacher:**

- The teacher organizes "group discussion" activities:

The teacher divides the students into groups of five or six. The teacher leads small groups of students to discuss each person's experience of loneliness and identify common problems. Group discussions ensure that members of each group have the opportunity to share and listen. The classroom is an open space where teachers and students work together to create a supportive environment, which helps build closer student relationships and lead to more authentic discussions.

**Students:** Share their own experiences dealing with loneliness. This includes: Some students may become immersed in a world of solitude, choosing to isolate themselves and avoid communication and interaction with others. They may choose to hide in their rooms, not participate in social activities, and lack opportunities to connect with others, thus deepening their sense of loneliness. Some students may escape loneliness by being addicted to their phones, computers or social media. Other students may fall into a negative mood, thinking that they are failures, that no one wants to be their friend, and that they will never get over the feeling of loneliness.

### **Teacher:**

Encourages group members to use written summaries of their shared experiences and list the reasons for them. Questions often arise about attribution style, coping style, degree of need for intimacy, and individual personality.

### **Students:**

Students summarize the causes of loneliness in the group and sharing their learning with the class to comb through the class's learning. Students are constantly encouraged to discuss solutions to problems.

## **Step 3: Planning and decision-making**

### **Teacher:**

Introductions to the LEAD Technology: Teachers introduce students to the LEAD technology, emphasizing that making informed action decisions is critical to coping with loneliness.

### **Students:**

Students listen to the teacher introduce the LEAD technology and learn about the key steps in making plans and decisions to deal with loneliness.



**Teacher:**

Teachers guide students to develop a plan to deal with loneliness according to their actual situation.

**Students:**

Students develop a plan to deal with loneliness and then ask the teacher if the plan is effective, appropriate, and targeted.

**Teacher:**

According to the LEAD technology, checks whether the student's plan for coping with loneliness is appropriate for the student. Each student's plan is unique.

**Step 4: Take action****Students:**

Follow the plan and record actual actions and difficulties encountered. Follow the plan and record actual actions and difficulties encountered. Students put LEAD skills into practice based on a plan to cope with loneliness. Students complete daily tasks according to a plan, set goals and work towards them. This may include improving social skills, attending social events, checking in with friends and family regularly, developing hobbies, seeking professional help, taking care of yourself, and learning to appreciate your own worth. Students are encouraged to put each step of the plan into practice to improve the effectiveness of coping with loneliness. Specifically planned practices can limit the negative impact of loneliness on other aspects of a student's life.

**Teacher:**

The teacher stresses the importance of prompt feedback after action. Students should regularly check their progress and think about whether their plans are working. The teacher can make some suggestions to help students better cope with the problems that may arise.

**Step 5: Evaluate and give feedback****Student:**

Students engage in small group discussions to assess and give feedback on the implementation of actions. In group sharing, students openly share their assessments and feedback in order to learn from each other. Under the guidance of the teacher, students self-assess their learning plan and the application of leadership skills. Then share with the team what the students have learned and how you feel.

**Teacher:**

After the group sharing, the teacher gives feedback to each student. Emphasize the growth and effort of each student in coping with loneliness. Students

are encouraged to further optimize their plans to cope with loneliness and address issues that may arise.

**Students:**

Based on feedback and group sharing, students can revisit their own plan for coping with loneliness and make adjustments where they fall short.

**5. Learning resources**

- 1) College students' mental health education course materials
- 2) Teaching lesson plans
- 3) Empty chairs
- 4) Pen and paper
- 5) Recommended reading:

The Lonely City: Adventures in the Art of Being Alone

The Power of Now: A Guide to Spiritual Enlightenment

Social Intelligence: The New Science of Human Relationships

**6. Evaluation**

- 1) Observe students' behavior to improve their loneliness.
- 2) Evaluate students' learning outcomes from each dimension of inverse quotient.

### Assessment form for validity of Lesson Plan 1

**Research Title:** The Development of an Instructional Model Based on Rogers' Theory to Enhance the Adversity Quotient for Guangxi International Business Vocational College.

**Research Objectives:**

1. To study the current situation of adversity quotient development.
2. To develop an instructional model based on Rogers' theory.
3. To compare students' adversity quotient before and after using the instructional model based on Rogers' theory.

**Assessor:** .....**Position:** .....

**Workplace:** .....

**Directions:**

Please assess the congruence between the lesson plan topics by putting  $\checkmark$  in the box according to the following criteria.

The rating is -1. There is an opinion that "inconsistent with the lesson plan topics.

The rating is 0. There is an opinion that "Not sure it corresponds to the lesson plan topics."

The rating is +1. There is an opinion that "Corresponds to the lesson plan topics."

**Course name:** test anxiety

No.	Item	Assessment result			Remarks
		-1	0	+1	
1	Concept				
2	Contents				
3	Objective				

4	Learning processes Step 1: Emotionally driven problem definition Step 2: Problem Discussing Step 3: Planning and decision making Step 4: Action Step 5: Evaluating and Feedback				
5	Learning resources				
6	Evaluation				

### Assessment form for validity of Lesson Plan 2

**Research Title:** The Development of an Instructional Model Based on Rogers' Theory to Enhance the Adversity Quotient for Guangxi International Business Vocational College.

**Research Objectives:**

1. To study the current situation of adversity quotient development.
2. To develop an instructional model based on Rogers' theory.
3. To compare students' adversity quotient before and after using the instructional model based on Rogers' theory.

**Assessor:** .....**Position:** .....

**Workplace:** .....

**Directions:**

Please assess the congruence between the lesson plan topics by putting  $\checkmark$  in the box according to the following criteria.

Rating is -1. There is an opinion that "inconsistent with the lesson plan topics.

Rating is 0. There is an opinion that "Not sure it corresponds to the lesson plan topics."

Rating is +1. There is an opinion that "Corresponds to the lesson plan topics."

**Course name:** friendship conflict

No.	Item	Assessment result			Remarks
		-1	0	+1	
1	Concept				
2	Contents				
3	Objective				

4	Learning processes Step 1: Emotionally driven problem definition Step 2: Problem Discussing Step 3: Planning and decision making Step 4: Action Step 5: Evaluating and Feedback				
5	Learning resources				
6	Evaluation				

### Assessment form for validity of Lesson Plan 3

**Research Title:** The Development of an Instructional Model Based on Rogers' Theory to Enhance the Adversity Quotient for Guangxi International Business Vocational College.

**Research Objectives:**

1. To study the current situation of adversity quotient development.
2. To develop an instructional model based on Rogers' theory.
3. To compare students' adversity quotient before and after using the instructional model based on Rogers' theory.

**Assessor:** .....**Position:** .....

**Workplace:** .....

**Directions:**

Please assess the congruence between the lesson plan topics by putting  $\checkmark$  it in the box according to the following criteria.

The rating is -1. There is an opinion that "inconsistent with the lesson plan topics.

The rating is 0. There is an opinion that "Not sure it corresponds to the lesson plan topics."

The rating is +1. There is an opinion that "Corresponds to the lesson plan topics."

**Course name:** Loneliness

No.	Item	Assessment result			Remarks
		-1	0	+1	
1	Concept				
2	Contents				
3	Objective				

4	Learning processes Step 1: Emotionally driven problem definition Step 2: Problem Discussing Step 3: Planning and decision making Step 4: Action Step 5: Evaluating and Feedback				
5	Learning resources				
6	Evaluation				



## Adversity Quotient Scale

The Adversity Quotient Scale consists of 30 situations and 60 items, divided into 4 dimensions:

- Control (10 items: 1, 11, 15, 17, 31, 35, 37, 51, 55, 57)
- Ownership (10 items: 5 items measure external attributions of confidence due to uncontrollable adversity, and 5 items measure internal attributions of responsibility due to controllable adversity: 2, 16, 32, 28, 58; 12, 18, 36, 52, 56)
- Reach (10 items: 3, 7, 13, 21, 23, 27, 29, 41, 43, 47)
- Endurance (10 items: 4, 8, 14, 22, 24, 28, 30, 42, 44, 48)

The AQ Scale primarily measures individuals' control and attributions to adversity, as well as the scope and duration of adversity's impact, using 20 adversity situations, totaling 40 items. Additionally, the scale includes 10 prosperity situations, with 2 questions each, totaling 20 items, measuring individuals' control and attributions to prosperity and the scope and duration of prosperity's impact. Since adversity merchants are not reflected in prosperity situations, these 20 items are not included in AQ scoring. The scale is scored on a 1-5 point scale, the total score for the Adversity Quotient (AQ) Scale is 200 points, with higher scores indicating higher AQ levels.

### Instructions

There are 30 events listed. Complete the questions for each event as follows:

1. Vividly imagine each event as if it is happening now, even if it seems unrealistic.
2. For both of the questions following each event, circle a number 1 through 5 that represents your response.

### 1. If your classmates don't accept your suggestions

1) I think the situation where my classmates don't accept my suggestions is:

No control      1    2    3    4    5      Complete Control

2) I believe the reason why my classmates don't accept my suggestions is:

Me              1    2    3    4    5      Other people or factors

### 2. If when introducing yourself to others, they don't react.

3) I think the reason people don't react is:

Relates to all aspects of my life 1 2 3 4 5 Just relates to this situation

4) The situation and reasons why people don't react to my introduction will:

Always exist 1 2 3 4 5 Never exist again

**3. If you've done something you feel very successful about**

5) I believe the reason for my success is:

Relates to all aspects of my life 1 2 3 4 5 Just relates to this situation

6) The situation and reasons for my success will:

Always exist 1 2 3 4 5 Never exist again

**4. If the distance between you and your best friend is increasing.**

7) The reasons affecting our estrangement definitely affect various aspects of my own life:

Relates to all aspects of my life 1 2 3 4 5 Just relates to this situation

8) The reasons for our drifting apart will:

Always exist 1 2 3 4 5 Never exist again

**5. Someone you respect calls you for advice.**

9) The reason this person called me for advice is something that:

Relates to all aspects of my life 1 2 3 4 5 Just relates to this situation

10) The reason this person called me for advice will:

Always exist 1 2 3 4 5 Never exist again

**6. If you engage in intense arguments with someone very important to you.**

11) The reason we have a heated argument is something over which I have:

No control 1 2 3 4 5 Complete Control

12) The outcome of this event is something for which I feel:

Not at all responsible 1 2 3 4 5 Completely responsible

**7. To retain your position, you must be reassigned.**

13) The reason for me being asked to be reassigned is:

Relates to all aspects of my life 1 2 3 4 5 Just relates to this situation

14) The situation and reasons for me being asked to be reassigned will:

Always exist 1 2 3 4 5 Never exist again

**8. A valued friend didn't attend your party on your birthday.**

15) The reason my friend didn't attend the party is because of my control ability over something:

No control 1 2 3 4 5 Complete Control

16) The reason my friend didn't show up is entirely related to:

Me 1 2 3 4 5 Other people or factors

**9. A close friend of yours had an accident.**

17) The reason for my friend's accident:

No control 1 2 3 4 5 Complete Control

18) The outcome of this event is something for which I feel:

Not at all responsible 1 2 3 4 5 Completely responsible

**10. You are invited to an important event.**

19) The reason I am being invited is something over which I have:

No control 1 2 3 4 5 Complete Control

20) The reason I am being invited is something that completely has to do with:

Me 1 2 3 4 5 Other people or factors

**11. You are turned down for an important assignment.**

21) The reason I am being turned down for this assignment is something that:

Relates to all aspects of my life 1 2 3 4 5 Just relates to this situation

22) The reason I am being turned down for this assignment will:

Always exist 1 2 3 4 5 Never exist again

**12. You received upsetting news from an important classmate.**

23) The upsetting news I received affects:

Relates to all aspects of my life 1 2 3 4 5 Just relates to this situation

24) The reason I am receiving upsetting news will :

Always exist 1 2 3 4 5 Never exist again

**13. You won an award.**

25) The reason for my award is:

No control 1 2 3 4 5 Complete Control

26) The reason for me winning the award depends on:

Me 1 2 3 4 5 Other people or factors

**14. Someone close to you is diagnosed with a serious illness.**

27) The reason he or she has a serious illness is something that:

Relates to all aspects of my life 1 2 3 4 5 Just relates to this situation

28)The reason he or she has a serious illness will:

Always exist 1 2 3 4 5 Never exist again

**15. Your strategy has encountered an unexpected situation.**

29) The reason my strategy is encountering unexpected situations is something that:

Relates to all aspects of my life 1 2 3 4 5 Just relates to this situation

30) The reason my strategy is encountering unexpected situations will:

Always exist 1 2 3 4 5 Never exist again

**16. You missed the train.**

31) The reason I missed the train is something over which I have:

No control 1 2 3 4 5 Complete Control

32) The reason I missed the train is something that completely has to do with:

Me 1 2 3 4 5 Other people or factors

**17. You are selected for an important event.**

33) The reason I am being selected for this event is something which I have:

No control 1 2 3 4 5 Complete Control

34) The outcome of this event is something for which I feel:  
 Not at all responsible 1 2 3 4 5 Completely responsible

**18. The task you are in charge of fails.**

35) The reason the task is failing is something over which I have:  
 No control 1 2 3 4 5 Complete Control

36) The outcome of this event is something for which I feel:  
 Not at all responsible 1 2 3 4 5 Completely responsible

**19. You were demoted or disciplined.**

37) The reason for my demotion or discipline is:  
 No control 1 2 3 4 5 Complete Control

38) The reason for this situation is something that completely has to do with:  
 Me 1 2 3 4 5 Other people or factors

**20. You receive an unexpected gift on your birthday.**

39) The reason I received this gift is something that:  
 Relates to all aspects of my life 1 2 3 4 5 Just relates to this situation

40) The reason I received this gift will:  
 Always exist 1 2 3 4 5 Never exist again

**21. Your transportation had an issue on the way to an appointment, causing you to be late.**

41) The reason for my transportation issue is something that:  
 Relates to all aspects of my life 1 2 3 4 5 Just relates to this situation

42) The reason for my transportation issue will:  
 Always exist 1 2 3 4 5 Never exist again

**22. A doctor tells you that you have a health issue.**

43) The reason for my health issue is something that:  
 Relates to all aspects of my life 1 2 3 4 5 Just relates to this situation

44) The reason for my health issue will:

Always exist    1    2    3    4    5    Never exist again

**23. You were appointed as a leader for an important event.**

45) The reason for my appointment is:

No control    1    2    3    4    5    Complete Control

46) The reason for my appointment is something that completely has to do with:

Me                    1    2    3    4    5    Other people or factors

**24. You left several messages for a friend but didn't receive a reply.**

47) The reason my friend didn't reply to me is something that:

Relates to all aspects of my life   1   2   3   4   5   Just relates to this situation

48) The reason my friend didn't reply to me will:

Always exist    1    2    3    4    5    Never exist again

**25. You received widespread praise due to your excellent performance.**

49) The reason for receiving praise is something that:

Relates to all aspects of my life   1   2   3   4   5   Just relates to this situation

50) The reason for receiving praise will:

Always exist    1    2    3    4    5    Never exist again

**26. At your physical exam, your doctor cautions you on your health.**

51) The reason my doctor is cautioning me is something over which I have:

No control    1    2    3    4    5    Complete Control

52) The outcome of this event is something for which I feel:

Not at all responsible   1   2   3   4   5   Completely responsible

**27. Someone you respect pays you a compliment.**

53) The reason I was paid a compliment is something over which I have:

No control    1    2    3    4    5    Complete Control

54) The outcome of this event is something for which I feel:

Not at all responsible 1 2 3 4 5 Completely responsible

**28. You receive an unfavorable performance appraisal.**

55) The reason I am receiving this appraisal is something over which I have:

No control 1 2 3 4 5 Complete Control

56) The outcome of this event is something for which I feel:

Not at all responsible 1 2 3 4 5 Completely responsible

**29. You did not receive an expected reward.**

57) The situation and reasons for me not receiving the expected reward is something over which I have:

No control 1 2 3 4 5 Complete Control

58) The situation and reasons for me not receiving the expected reward is something that completely has to do with:

Me 1 2 3 4 5 Other people or factors

**30. You are elected by your peers to head an important event.**

59) The reason I am being elected is something that:

Relates to all aspects of my life 1 2 3 4 5 Just relates to this situation

60) The reason I am being elected will:

Always exist 1 2 3 4 5 Never exist again

Low AQ (0-59):

- If your AQ falls within this range, you have probably suffered unnecessarily in a number of ways.

Moderate AQ (95-134):

- You usually do a decent job of navigating life as long as everything is going relatively smoothly.

High AQ (166-200):

- If your overall AQ is in this range, you probably have the ability to withstand significant adversity and continue to move forward and upward in your life.

Additional Ranges:

- There is not a discernible difference between someone with an AQ of 134 and someone with an AQ of 135. However, there is a difference between people with low, moderate, and high AQs. Use these descriptions to learn, not to categorize yourself or seal your fate.

This arrangement should provide a clearer understanding of the different AQ ranges and what they signify.



### Assessment form for Validity of Adversity Quotient Scale

**Research Title:** The Development of an Instructional Model Based on Rogers' Theory to Enhance the Adversity Quotient for Guangxi International Business Vocational College.

**Research Objectives:**

1. To study the current situation of adversity quotient development.
2. To develop an instructional model based on Rogers' theory.
3. To compare students' adversity quotient before and after using the instructional model based on Rogers' theory.

**Assessor:** ..... **Position:** .....

**Workplace:** .....

**Directions:**

Please assess the congruence between the lesson plan topics by putting  $\surd$  in the box according to the following criteria.

The rating is -1. There is an opinion that "inconsistent with the lesson plan topics.

The rating is 0. There is an opinion that "Not sure it corresponds to the lesson plan topics."

The rating is +1. There is an opinion that "Corresponds to the lesson plan topics."

Item	Assessment result			Remarks
	-1	0	+1	
1				
2				
3				
4				
5				

Item	Assessment result			Remarks
	-1	0	+1	
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				

Item	Assessment result			Remarks
	-1	0	+1	
25				
26				
27				
28				
29				
30				

### Suggestions

.....  
 .....  
 .....

Sign.....Assessor

(.....)

Date...../...../.....

## Observation form about Student behavior

Course Title: ..... Instructor: .....

Duration: ..... Classroom location: .....

Total number of students: ..... Observer: .....

### Lesson 1: test anxiety

Learning process	Learner behavior
Step 1: Emotionally driven problem definition	
Step 2: Problem Discussing	
Step 3: Planning and decision making	
Step 4: Action	
Step 5: Evaluating and Feedback	

### Lesson 2: friendship conflict

Learning process	Learner behavior
Step 1: Emotionally driven problem definition	
Step 2: Problem Discussing	
Step 3: Planning and decision making	
Step 4: Action	
Step 5: Evaluating and Feedback	

### Lesson 3: Loneliness

Learning process	Learner behavior
Step 1: Emotionally driven problem definition	
Step 2: Problem Discussing	
Step 3: Planning and decision making	
Step 4: Action	
Step 5: Evaluating and Feedback	

## Assessment form for Validity of observation form about Student behavior

**Research Title:** The Development of an Instructional Model Based on Rogers' Theory to Enhance the Adversity Quotient for Guangxi International Business Vocational College.

**Research Objectives:**

1. To study the current situation of adversity quotient development.
2. To develop an instructional model based on Rogers' theory.
3. To compare students' adversity quotient before and after using the instructional model based on Rogers' theory.

**Assessor:** ..... **Position:** .....

**Workplace:** .....

**Directions:**

When using the observation form, please consider the consistency of the interview about whether each of students' behavior and Suggested Questions is correct. After considering it, please check in the corresponding box. Use the following criteria for consideration.

The rating is -1. There is an opinion that "Inconsistent with your opinion."

The rating is 0. There is an opinion that "Not sure it corresponds to your opinion."

The rating is +1. There is an opinion that "Corresponds to your opinion."

**Course Title:** ..... **Instructor:** .....

**Duration:** ..... **Classroom location:** .....

**Total number of students:** ..... **Observer:** .....

## Lesson 1: test anxiety

Learning Process	Learning Observation	Assessment Results			Remarks
		-1	0	+1	
Step 1: Emotionally driven problem definition					
Step 2: Problem Discussing					
Step 3: Planning and decision making					
Step 4: Action					
Step 5: Evaluating and Feedback					

## Lesson 2: friendship conflict

Learning Process	Learning Observation	Assessment Results			Remarks
		-1	0	+1	
Step 1: Emotionally driven problem definition					
Step 2: Problem Discussing					
Step 3: Planning and decision making					
Step 4: Action					
Step 5: Evaluating and Feedback					

## Lesson 3: Loneliness

Learning Process	Learning Observation	Assessment Results			Remarks
		-1	0	+1	
Step 1: Emotionally driven problem definition					
Step 2: Problem Discussing					
Step 3: Planning and decision making					
Step 4: Action					
Step 5: Evaluating and Feedback					

Comments/Observations:

.....  
.....  
.....

Sign..... Observer

(.....)

Date...../...../.....

### Interview form about opinions on teaching

Thank you for participating in this interview. Our purpose is to collect your information and suggestions on the teaching of improving college students' adversity quotient. Your opinions will contribute to enhancing teaching methods and curriculum. Please respond to the following questions:

#### Part 1 Information on the identity of the interviewees

Name: ..... Gender: .....

class: ..... Interview time: .....

#### Part 2 Interview Content

Interview Question	Record of Discussion
1. Do you feel your adversity quotient has improved?	
2. Which part of your teaching activity do you think will best improve your adversity quotient	
3. Do you apply what you have learned in class to your real life?	
4. What difficulties did you encounter in classroom learning activities? How did you solve them?	
5. What part of the teaching content are you are most interested in, and why?	
6. Do you like this instructional method? Do you like this course?	



### Assessment form for Validity of opinions on the teaching interview form

**Research Title:** The Development of an Instructional Model Based on Rogers' Theory to Enhance the Adversity Quotient for Guangxi International Business Vocational College.

**Research Objectives:**

1. To study the current situation of adversity quotient development.
2. To develop an instructional model based on Rogers' theory.
3. To compare students' adversity quotient before and after using the instructional model based on Rogers' theory.

**Assessor:** .....**Position:** .....

**Workplace:** .....

**Directions:**

When using the observation form, please consider the consistency of the interview about whether each of students' behavior and Suggested Questions is correct. After considering it, please check in the corresponding box. Use the following criteria for consideration.

Rating is -1. There is an opinion that "Inconsistent with your opinion."

Rating is 0. There is an opinion that "Not sure it corresponds to your opinion."

Rating is +1. There is an opinion that "Corresponds to your opinion."

No.	Questions	Assessment result			Remarks
		-1	0	+1	
1	Do you feel your adversity quotient has improved?				
2	Which part of your teaching activity do you think will best improve your adversity quotient				
3	Do you apply what you have learned in class to your real life?				
4	What difficulties did you encounter in classroom learning activities? How did you solve them?				
5	What part of the teaching content are you are most interested in, and why?				
6	Do you like this instructional method? Do you like this course?				

### Suggestions

.....  
 .....  
 .....

Sign.....Assessor

(.....)

Date...../...../.....

## Appendix D

The Results of the Quality Analysis of Research Instruments

Index of Objective Consistency (IOC) Statistics of items about the  
instructional model based on Rogers' theory

No.	Contents	Experts					IOC	Validity
		No. 1	No. 2	No. 3	No. 4	No. 5		
1	Principle	1	1	1	1	1	1.00	Valid
2	Objective	1	1	1	1	1	1.00	Valid
3	Learning processes	1	1	1	1	1	1.00	Valid
4	Result	1	1	1	1	1	1.00	Valid

Index of Item Objective Coherence (IOC) Statistical Tables on the  
Questionnaire about the current situation and existing problems of the  
adversity quotient of college student

No.	Contents	Experts					IOC	Validity
		No. 1	No. 2	No. 3	No. 4	No. 5		
	Student							
1	Student are interested in learning adversity quotient.	1	1	1	1	1	1.00	Valid
2	Students think that it is very important for them to master a certain knowledge of adversity quotient.	1	1	1	1	1	1.00	Valid
3	Students are willing to spend time learning about adversity quotient.	1	1	1	1	1	1.00	Valid
4	Students have various ways to gain knowledge of adversity quotient.	1	1	1	1	1	1.00	Valid
5	Compared with modern skills, students are more willing to learn adversity quotient - related skills.	1	1	1	1	1	1.00	Valid
	Teacher							
1	The teacher believes that increasing the adversity quotient is important for personal development and self-actualization.	1	1	1	1	1	1.00	Valid
2	Teachers emphasize the importance of understanding knowledge about adversity quotient with students.	1	1	1	1	1	1.00	Valid
3	Teachers ask the students to learn about how to enhance the adversity quotient.	1	1	1	1	1	1.00	Valid

No.	Contents	Experts					IOC	Validity
		No. 1	No. 2	No. 3	No. 4	No. 5		
4	Teachers are willing to offer and teach students the adversity quotient knowledge.	1	1	1	1	1	1.00	Valid
5	Teachers can have easy access to teaching resources related to adversity quotient.	1	1	1	1	1	1.00	Valid
Learning process								
1	Teachers create safe learning situations so that students can learn in a relaxed atmosphere.	1	1	1	1	1	1.00	Valid
2	The teaching methods and strategies adopted by the teacher are effective and make full use of various teaching resources and methods.	1	1	1	1	1	1.00	Valid
3	The classroom is dynamic and interactive.	1	1	1	1	1	1.00	Valid
4	The teacher's assessment of students' ability to learn is accurate and timely, and feedback is specific and helpful.	1	1	1	1	1	1.00	Valid
5	The content of the classroom is closely related to real life and is interesting.	1	1	1	1	1	1.00	Valid
Environment								
1	School has done a good job of promoting the adversity quotient knowledge.	1	1	1	1	1	1.00	Valid

No.	Contents	Experts					IOC	Validity
		No. 1	No. 2	No. 3	No. 4	No. 5		
2	School has created a safe and supportive teaching environment helps students to learn the adversity quotient independently.	1	1	1	1	1	1.00	Valid
3	School attaches great importance to educating students about the adversity quotient.	1	1	1	1	1	1.00	Valid
4	School will incorporate the knowledge of adversity quotient of students into the students' comprehensive performance assessment.	1	1	1	1	1	1.00	Valid
5	You think that too much emphasis on professional academic achievement will reduce students' focus on improving adversity quotient	1	1	1	1	1	1.00	Valid

Index of Item Objective Consistency (IOC) Statistics on the Interview Schedule of the current situation and existing problems about the adversity quotient of college student

No.	Contents	Experts					IOC	Validity
		No. 1	No. 2	No. 3	No. 4	No. 5		
1	What are the current situation and existing problems about students' adversity quotient?	1	1	1	1	1	1.00	Valid
2	Why do college students' adversity quotient have these current situations and problems?	1	1	1	1	1	1.00	Valid
3	How to improve the adversity quotient of college students?	1	1	1	1	1	1.00	Valid



Index of Objective Coherence (IOC) Statistic for Programs on Lesson  
Plans

No.	Contents	Experts					IOC	Validity
		No.	No.	No.	No.	No.		
		1	2	3	4	5		
Lesson Plan 1								
1	Concept	1	1	1	1	1	1.00	Valid
2	Contents	1	1	1	1	1	1.00	Valid
3	Objective	1	1	1	1	1	1.00	Valid
4	Learning processes	1	1	1	1	1	1.00	Valid
5	Learning resources	1	1	1	1	1	1.00	Valid
6	Evaluation	1	1	1	1	1	1.00	Valid
Lesson Plan 2								
1	Concept	1	1	1	1	1	1.00	Valid
2	Contents	1	1	1	1	1	1.00	Valid
3	Objective	1	1	1	1	1	1.00	Valid
4	Learning processes	1	1	1	1	1	1.00	Valid
5	Learning resources	1	1	1	1	1	1.00	Valid
6	Evaluation	1	1	1	1	1	1.00	Valid
Lesson Plan 3								
1	Concept	1	1	1	1	1	1.00	Valid
2	Contents	1	1	1	1	1	1.00	Valid
3	Objective	1	1	1	1	1	1.00	Valid
4	Learning processes	1	1	1	1	1	1.00	Valid

---

No.	Contents	Experts					IOC	Validity
		No.	No.	No.	No.	No.		
		1	2	3	4	5		
5	Learning resources	1	1	1	1	1	1.00	Valid
6	Evaluation	1	1	1	1	1	1.00	Valid

---

### Item Objective Consistency Index (IOC) Statistics on Adversity Quotient Scale

Title No.	Experts					IOC	Validity
	No. 1	No. 2	No. 3	No. 4	No. 5		
1	1	1	1	1	1	1.00	Valid
2	1	1	1	1	1	1.00	Valid
3	1	1	1	1	1	1.00	Valid
4	1	1	1	1	1	1.00	Valid
5	1	1	1	1	1	1.00	Valid
6	1	1	1	1	1	1.00	Valid
7	1	1	1	1	1	1.00	Valid
8	1	1	1	1	1	1.00	Valid
9	1	1	1	1	1	1.00	Valid
10	1	1	1	1	1	1.00	Valid
11	1	1	1	1	1	1.00	Valid
12	1	1	1	1	1	1.00	Valid
13	1	1	1	1	1	1.00	Valid
14	1	1	1	1	1	1.00	Valid
15	1	1	1	1	1	1.00	Valid
16	1	1	1	1	1	1.00	Valid
17	1	1	1	1	1	1.00	Valid
18	1	1	1	1	1	1.00	Valid
19	1	1	1	1	1	1.00	Valid

---

Title No.	Experts					IOC	Validity
	No. 1	No. 2	No. 3	No. 4	No. 5		
20	1	1	1	1	1	1.00	Valid
21	1	1	1	1	1	1.00	Valid
22	1	1	1	1	1	1.00	Valid
23	1	1	1	1	1	1.00	Valid
24	1	1	1	1	1	1.00	Valid
25	1	1	1	1	1	1.00	Valid
26	1	1	1	1	1	1.00	Valid
27	1	1	1	1	1	1.00	Valid
28	1	1	1	1	1	1.00	Valid
29	1	1	1	1	1	1.00	Valid
30	1	1	1	1	1	1.00	Valid

---

### Index of Objective Consistency (IOC) Statistic for Items on the Student Behavior Observation Schedule

No.	Contents	Experts					IOC	Validity
		No. 1	No. 2	No. 3	No. 4	No. 5		
<b>Lesson 1</b>								
1	Step 1: Emotionally driven problem definition	1	1	1	1	1	1.00	Valid
2	Step2: Problem Discussing	1	1	1	1	1	1.00	Valid
3	Step3: Planning and decision making	1	1	1	1	1	1.00	Valid
4	Step4: Action	1	1	1	1	1	1.00	Valid
5	Step5: Evaluating and Feedback	1	1	1	1	1	1.00	Valid
<b>Lesson 2</b>								
1	Step 1: Emotionally driven problem definition	1	1	1	1	1	1.00	Valid
2	Step2: Problem Discussing	1	1	1	1	1	1.00	Valid
3	Step3: Planning and decision making	1	1	1	1	1	1.00	Valid
4	Step4: Action	1	1	1	1	1	1.00	Valid
5	Step5: Evaluating and Feedback	1	1	1	1	1	1.00	Valid
<b>Lesson 3</b>								
1	Step 1: Emotionally driven problem definition	1	1	1	1	1	1.00	Valid
2	Step2: Problem Discussing	1	1	1	1	1	1.00	Valid
3	Step3: Planning and decision making	1	1	1	1	1	1.00	Valid
4	Step4: Action	1	1	1	1	1	1.00	Valid

---

No.	Contents	Experts					IOC	Validity
		No. 1	No. 2	No. 3	No. 4	No. 5		
5	Step5: Evaluating and Feedback	1	1	1	1	1	1.00	Valid

---

### Item Objective Consistency Index (IOC) Statistic on the Instructional Opinion Interview Form

No.	Contents	Experts					IOC	Validity
		No. 1	No. 2	No. 3	No. 4	No. 5		
1	Do you feel your adversity quotient has improved?	1	1	1	1	1	1.00	Valid
2	Which part of your teaching activity do you think will best improve your adversity quotient?	1	1	1	1	1	1.00	Valid
3	Do you apply what you have learned in class to your real life?	1	1	1	1	1	1.00	Valid
4	What difficulties did you encounter in classroom learning activities? How did you solve them?	1	1	1	1	1	1.00	Valid
5	What part of the teaching content are you most interested in, and why?	1	1	1	1	1	1.00	Valid
6	Do you like this instructional method? Do you like this course?	1	1	1	1	1	1.00	Valid

Appendix E  
Certificate of English



**BS  
RU** BANSOMDEJCHAOPRAYA  
RAJABHAT UNIVERSITY

This is to certify that

***Mrs. Qin Sun***

Achieved BSRU English Proficiency Test (BSRU-TEP) level

**C2**

Given on 13<sup>th</sup> February 2022

(Assistant Professor Dr Kulsirin Aphiratvoradej)

Director

## Appendix F

The Document for Acceptance Research

**World Journal of Education**

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April 23, 2024

Gradute School  
Bansomdejchaopraya Rajabhat University  
Bangkok, Thailand

**Dear Sun Qin,**

Thanks for your submission to *World Journal of Education*.

We have the pleasure to inform you that your manuscript has been accepted for publication. It will be published on the Vol. 14, No. 2, in June 2024.

Title: The Development of an Instructional Model Based on Rogers' Theory to Enhance the Adversity Quotient for Guangxi International Business Vocational College

Authors: Sun Qin, Bung-on Sereerat, Saifon Songsiengchai & Penporn Thongkumsuk

If you have any questions, please do not hesitate to contact with us.

Sincerely,

A handwritten signature in black ink, appearing to read "Sara M. Lee".

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Sara M. Lee

On behalf of,  
The Editorial Board of *World Journal of Education*  
Sciedu Press

## Researcher Profile

**Name-Surname:** Qin-Sun  
**Birthday:** 11 May 1989  
**Place of Birth:** Nanning, Guangxi, China

### **Educational background:**

1. Doctor of Philosophy Program in Curriculum and Instruction, Bansomdejchaopraya Rajabhat University, 2020.08—up to now.
2. Master's Degree in Developmental and educational psychology, Guangxi Normal University, 2013.09-2016.06.
3. Bachelor's degree in English, Guangxi University, 2008.09-2012.06.

### **Work Experience:**

1. Teacher, Guangxi International Business Vocational College, 2016.06-up to now.