



**A COMPARATIVE STUDY OF STUDENTS' SATISFACTION IN  
TWO UNIVERSITIES: CASE OF RAJAMANGALA UNIVERSITY  
OF TECHNOLOGY KRUNGTHEP AND UNIVERSITY OF JINAN**

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**AN INDEPENDENT STUDY SUBMITTED IN PARTIAL  
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KRUNGTEHP**

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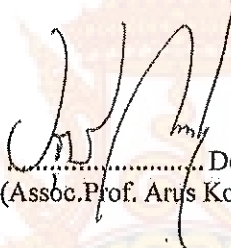
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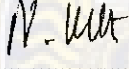
**Advisor**                     Supot Rattanapun, Ph.D.

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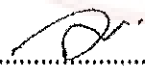
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## **ABSTRACT**

The research on testing students' degree of satisfaction with universities started in America in the 1950s or 1960s. Fifty years later, it has been formed into mature theories, systems and methods. This paper will be of great help and significance for realizing the people-oriented strategy, reforming education and deploying resources reasonably by testing students' degree of satisfaction, both internally and externally. Theories of higher education, consumer behavior and other disciplines are used in this study, and through a comparative analysis of relevant literatures, on the basis of understanding the status quo, evaluation systems, mechanisms, as well as technical methods for the evaluation of college students' satisfaction in major education countries in the world, the modes, characteristics and effect of college students' satisfaction evaluation are compared and analyzed. The satisfaction evaluation of Chinese and Thai college students is analyzed and compared, and a summary analysis is conducted.

**Keywords: students' degree of satisfaction, testing, comparison**

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Mr. Ruiting Li

## **PREFACE**

College students' satisfaction evaluation is a work that originated in the United States in the 1960s. After half a century of development, some developed countries have acquired more mature theories, systems and methods for this evaluation. The research and practice of China and Thailand are used as samples for comparative research in this article. A more systematic introduction is given to the history, the current situation, operating systems, mechanisms, scales, system construction, technical methods and the implementation effect of university students' satisfaction evaluation in China and Thailand. In particular, the practice of large-scale satisfaction evaluation work in the United States and the United Kingdom is specifically analyzed, which has a learning and reference effect, meanwhile the theoretical basis, operating systems, mechanisms, operating modes and technologies used for the satisfaction evaluation of Chinese and Thai college students are analyzed and compared. Through the characteristics of the methods, combined with Thailand's small-scale student satisfaction evaluation practice, it attempts to conduct a summary analysis, trying to find the differences between the two.

The main content of this article is divided into five chapters: the research background, purpose and significance of this article are mainly elaborated in the first chapter, and the research framework as well as future prospects of this article is described. The development of college students' satisfaction is mainly analyzed and studied in the second chapter through a literature review home and abroad, the definition of related concepts and the theoretical basis. Research methods, questionnaire design and data collection are introduced in Chapter Three. The fourth chapter presents a statistical analysis of the survey results. Chapter Five: research conclusions and countermeasures.

Mr. Ruiting Li

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# CHAPTER 1

## INTRODUCTION

College students' satisfaction evaluation is a foreign education evaluation activity that began in the 1960s with students as the object. By issuing and recycling questionnaires, the quality and level of colleges and universities are systematically evaluated, which is an open survey and evaluation system.

An effective evaluation system has been formed for the evaluation of college students' satisfaction in Western developed countries, such as the United States and the United Kingdom, which is a means or method for countries to consider the quality and level of university education.

### 1.1 Background and Rationale

In recent years, Thailand and China have extensively exchanged and cooperated in economics, culture, sports, education, health, science and technologies, etc., providing opportunities and requirements for both countries to compare and learn from each other. In view of this, this article aims to understand the current situation of school satisfaction in Thailand and China through questionnaire surveys and interviews, so that the two countries could have an intuitive and clear understanding of their own and each other's student satisfaction, at the same time, through a comparative analysis of the two countries' school satisfaction, references are provided for learning from each other.

College students' satisfaction evaluation is a foreign education evaluation activity that began in the 1960s with students as the object. (Chen Min, 2002) By issuing and recycling questionnaires, the quality and level of university education are systematically evaluated, which is an open survey and evaluation system aiming to provide a basis for the Government and the public to know the development status of education as well as for the allocation of governmental educational resources by publishing the evaluation results. An effective evaluation system has been formed for the evaluation of college students' satisfaction in Western developed countries, such as the United States and the United Kingdom, which is a means or method for the countries to consider the quality and level of university education. A relatively mature theory of satisfaction evaluation has been formed abroad with perfect evaluation systems, mechanisms, system construction and working modes, advanced evaluation technologies as well as a high social recognition and credibility, which has been promoted and applied as an advanced evaluation method and has achieved fruitful results.

### **1.1.1 Background of UTK**

Royal Bangkok University of Technology (RMUTK), Rajamangala University of Technology Krungthep is the most respected public university in Thailand. (Sakit, 2014) It was established under the auspices of His Majesty King Rama IX of Thailand in 1975 with the purpose of improving the level of scientific and technological education in Thailand. Ranked among the top five in teaching quality assessment by the Ministry of Higher Education of Thailand for 11 consecutive years, the school is located in the center of Bangkok as the largest public university in Thailand. The campus is located in the most prosperous commercial center (Silom) of Bangkok, the capital of Thailand. The school is surrounded by the World Fortune 500 companies, four major accounting firms as well as embassies and consulates of various countries, with convenient transportation and living. The school covers a total area of 237,200 square meters, with more than 15,000 students and a strong faculty. 90% of its teachers have a doctorate degree of prestigious schools with overseas study backgrounds, who also enjoy the honor of the Thai royal family by presiding over the graduation ceremonies and awarding the graduation certificates.

In 2005, according to the California State University System (CSU), the Royal Thai Institute of Technology was divided into nine closely connected and independent universities, one of which is the Royal Bangkok Institute of Technology. There are nine royal institutes of technology distributed throughout Thailand, where this campus is unique.

### **1.1.2 Background of UJN**

University of Jinan is a key and comprehensive university in Shandong Province entitled with a distinctive institution of higher learning, which is committed to producing applied-talented students. (UJN, 2020) Enrolling students from all over China, it offers bachelor's, master's and doctoral-degree programs and enjoys the right to recommend postgraduates exempted from admission examinations.

Since its foundation, University of Jinan has adhered firmly to its motto of "Magnanimity and Perseverance, Erudition, and the Pursuit of Truth and Excellence" as well as its educational philosophy of "Diligence, Rigorousness, Unity and Creativity". In addition, it carries forward the spirit of "being industrious, keeping pace with the times and pursuing excellence". Nowadays, University of Jinan has become an important base of talent training for local and regional economic development, where more than 220,000 students have graduated.

According to the school's official website in April 2021, its campus covers an area of 2.43 million square meters, with a school building area of over 1.04 million square meters, a total value of 2.93 billion yuan in fixed assets and a total value of 570 million yuan in teaching and research equipment; it levels colleges with 96 undergraduate majors; 2 post-doctoral research mobile stations, 5 first-level discipline doctoral-degree authorization points, 25 first-level discipline master-degree authorization points,

12 master professional-degree training categories, 2117 full-time teachers and 37529 full-time undergraduates, postgraduates as well as international students.

## **1.2 The Statement of Research Problems**

1. Does tuition have a big impact on the overall satisfaction of college students?
2. Are there differences in satisfaction among college students with different professional backgrounds and grades?
3. Do all factors have an impact on the satisfaction of college students? Do the various factors have different relevance to the impact of college students' satisfaction?

## **1.3 The Objectives of the Research Study**

This research is mainly a quantitative analysis study, whose research results are supported by an objective and scientific quantitative analysis.

Taking college students' satisfaction as the research object, the following points are the objectives of this research:

- a. This study presents a comprehensive understanding of the status quo and the latest development trend of the evaluation on college students' satisfaction in major education countries in the world through comparative research on relevant domestic and foreign literatures, and independent research is conducted on this research phenomenon. Through a comprehensive comparison of the evaluation on college students' satisfaction in these countries, the similarities and differences in the evaluation of college students' satisfaction in China and Thailand are found.

- b. Foreign advanced evaluation methods are learned to improve the scientific nature of satisfaction evaluation. Research on the evaluation of college students' satisfaction began in the United States in the 1950s. Sino-Thailand research in this area started later. In this research, the scientific nature of evaluation on Sino-Thailand university students' satisfaction is promoted and developed by learning advanced foreign evaluation methods as well as absorbing and learning from advanced foreign theories and experience.

- c. This research starts with the related technologies and theories of college students' satisfaction evaluation in developed countries such as the United Kingdom and the United States, the evaluation models of college students' satisfaction home and abroad are analyzed and summarized, advanced foreign experience is learned, an evaluation and a comparative analysis on college students' satisfaction are conducted at the application level, and countermeasures as well as suggestions are put forward for evaluating college students' satisfaction.

## 1.4 The Conceptual Framework

1. Investigate the data, find out what are the main factors that affect college students' satisfaction, summarize the data collected, and find out the key independent as well as dependent variables.

2. Make a questionnaire based on independent variables and divide it into two groups for investigation, one group is students of UTK studying in China, and the other group is students from UJN University. The data collected is sorted and sampled.

3. Sort out the sampled data, analyze it using SPSS, draw the final conclusion and the main factors that affect the satisfaction of college students, and conduct a comparative analysis.

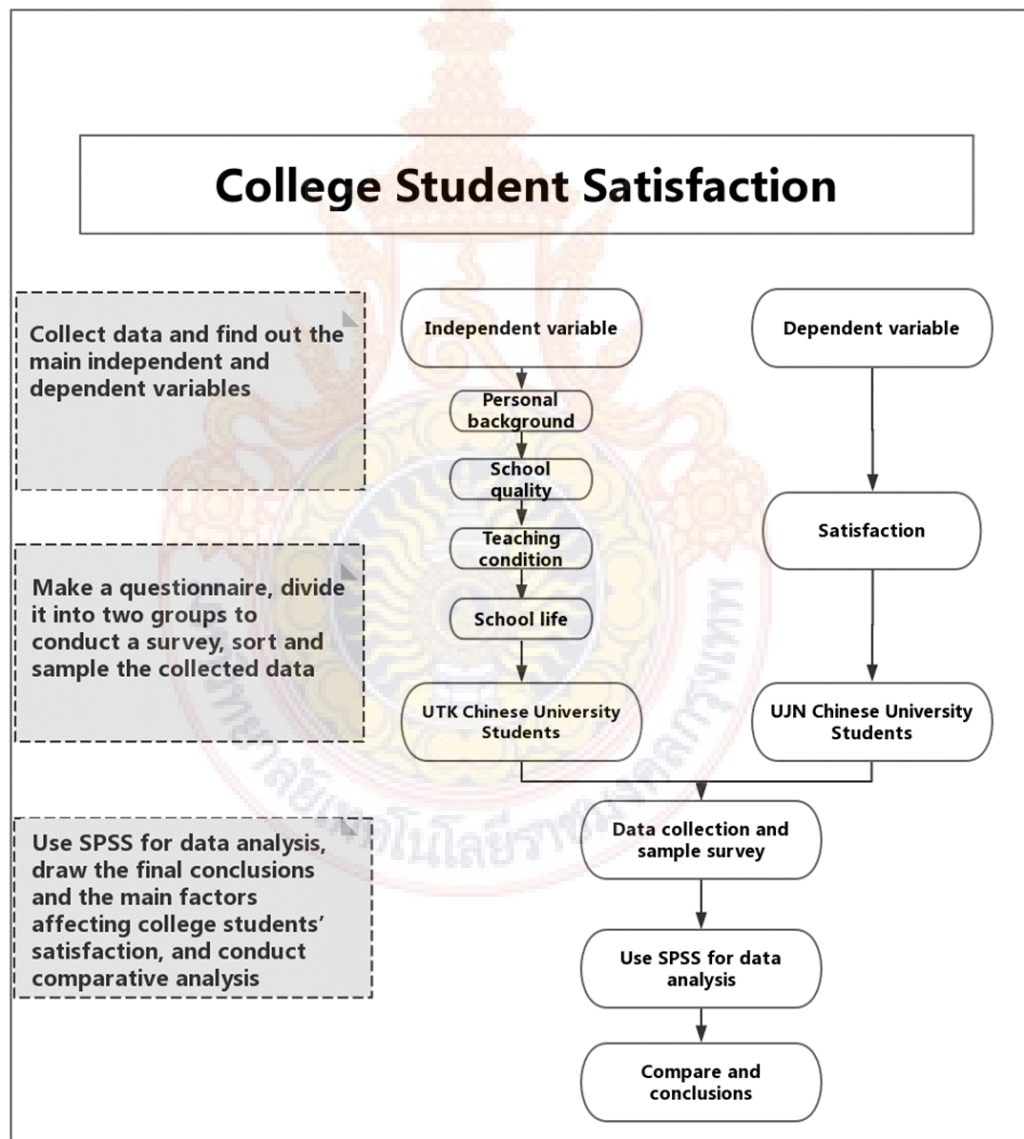


Figure 1. Research framework

## **1.5 The Research Hypotheses**

H1. College students have a higher overall satisfaction with universities with low tuition fees.

H2. There are significant differences in college students' satisfaction with schools of different professional backgrounds and grades.

H3. Each element has an impact on college students' satisfaction with a school, and there are different correlations in the impact of each element on college students' satisfaction with a school.

## **1.6 The Benefits of the Research**

Students are the foundation of education, so the quality of students also reflects the quality of education. The evaluation of college students' satisfaction with schools will have an important impact on the service of higher education, which can timely reflect the existing challenges and problems faced in the development of higher education. Therefore, the evaluation of college students' satisfaction experience is used as one of the standards to measure the quality of higher education. A survey on college students' satisfaction with schools formed by experiencing the quality of products and service of schools provides reference data for the research on further improving the quality of higher education.

## **1.7 The Scope of the Research Study**

The research is mainly aimed at university students in UJN, China and UTK, Thailand.

Questionnaires are used to survey college students and graduate students of different grades, who are compared based on their survey results, final conclusions are drawn and relevant suggestions are put forward.

## **1.8 The Limitations of the Research**

Although this research was deliberately constructed and developed, the author also encountered some unavoidable shortcomings in the research process, which might slightly affect the results of this research. The author of this study only investigated the students of UTK International College in Thailand and UJN School of Information in China, so the conclusion might not be applicable to all colleges or majors.

Only quantitative methods are used in this study. In order to guarantee the quantity of data, its quality cannot be guaranteed. A combination of qualitative and quantitative methods will be more effective. This investigation is limited to online investigations. Therefore, the results may not be generalized for non-Internet users.

## 1.9 Further Research

This study is only a superficial study on the satisfaction of Chinese and Thai college students. I hope that other researchers interested in this topic could improve in the following aspects:

First of all, conduct stratified random sampling of college students from different colleges in the two countries, ensuring that the samples can well represent the population;

Secondly, in view of some differences in the life attributes of college students in the two countries, the same survey is adopted.

It is difficult to obtain different information from the two countries through the questionnaire. In the survey, more in-depth interviews should be combined;

Thirdly, more efficient questionnaires should be explored.



## CHAPTER 2

### RELATED DOCUMENTS AND RESEARCH

#### 2.1 Literature Review

The study on student satisfaction was first proposed by American scholars. In the 1960s, the American Council of Education began an evaluation on student satisfaction. After more than half a century of development, its concept has been extensively studied and discussed in depth, which is still a hot research topic today.

The concepts related to student satisfaction theories, related theories and research models home and abroad will be introduced in this chapter.

##### 2.1.1 A Review of Foreign Research Status

The development of research on measurement theories of college students' satisfaction began in the United States in the 1950s. (Han Yuzhi, 2008) American scholars used the theories of consumer satisfaction for reference, who creatively proposed the concept of student satisfaction, and established an SCI model. In the 1960s, Professor Stephanie L Juillerat and Laurie A. Schriener in the United States proposed an SSI scale and formed the Noel-Levitz Company to start a large-scale evaluation work, which is a famous evaluation on American college students' satisfaction. Research on the measurement of UK's university students' satisfaction started later than that of the U.S., but there are unique methods in terms of satisfaction measurement and research to improve school teaching quality. This research will be explained from two aspects: theoretical research and research practice.

The study on student satisfaction was first proposed by American scholars. (Han Yuzhi, 2006) In the 1960s, the American Council of Education began an evaluation of student satisfaction. After more than half a century of development, its concept has now been extensively studied and discussed in depth, which remains a hot research topic to this day.

##### 2.1.2 A Review of Domestic Research Status

The concept of college students' satisfaction in our country was put forward in the 1990s, which started at least 30 years later than that of the United States. ( Zhao Guojie and Shi Xiaoming, 2003) Until today, our country is still at the stage of imitation in terms of theoretical research. In March 2003, Zhao Guojie and Shi Xiaoming used the American Customer Satisfaction Index ACSI as the theoretical basis in the article *A Preliminary Study on the Measurement of Expected Quality of College Students and Universities*.

As is shown in the ACSI model (Figure 2), it is composed of six variables: customer satisfaction and its determinants, perceived quality, customer expectations and perceived value, customer loyalty and customer complaints, forming an overall logical structure. (Liu Wu and Yang Xue, 2007) In September 2006, Liu Wu and Yang Xue used the American ACSI Model in their article *Construction of China's Higher Education Customer Satisfaction Index Model* and tried to establish "university image", "customer expectations" and "perceived quality". "Customer satisfaction", "customer loyalty" and "customer trust" constitute the customer satisfaction index model in Chinese higher education.

In December 2003, Zhu Guofeng and others made innovations on the basis of the ACSI model. (Zhu Guofeng, 2003) The education system is divided into four parts: the Central Government, provincial governments, municipal governments and ordinary schools. Through the method of layered weighting and consolidation, the satisfaction of university students in the whole country can be calculated based on the survey data on their satisfaction with basic education institutions. "This model conforms to our country's national conditions, which has certain application value as well as maneuverability.

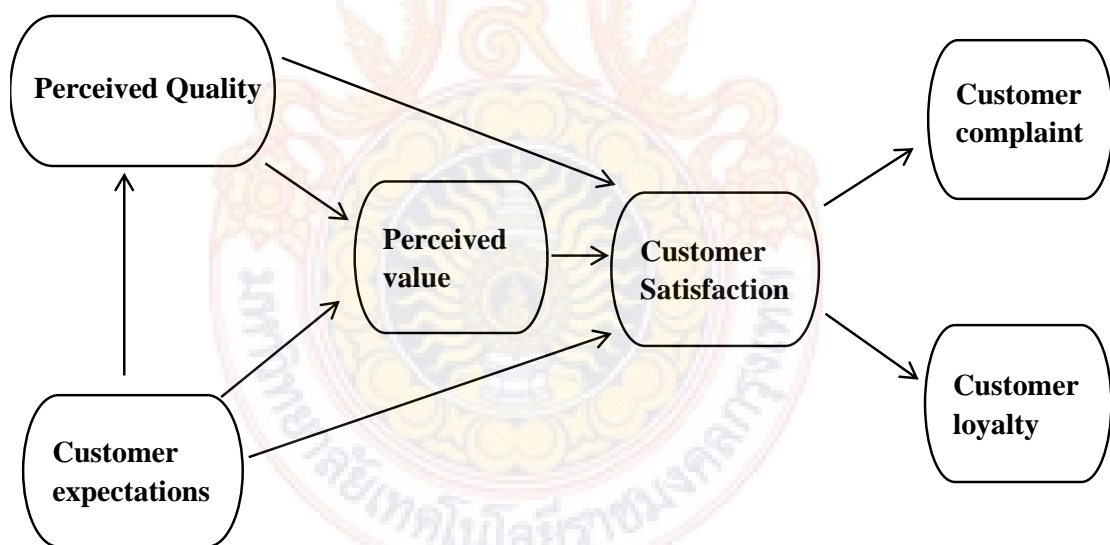


Figure 2. ACSI Satisfaction Index Model

## **2.2 Definition**

### **2.2.1 Customer Satisfaction**

Customer satisfaction is customer-centric, which is to achieve customers' subjective satisfaction with marketing concept through meeting their needs. (Lu Xiongwen, 2013) Marketing Guru Philip Kotler defines customer satisfaction as an emotion of pleasure and disappointment formed by comparing the perceivable performance of an item with its own expectations. This perceivable performance can be quantified.

### **2.2.2 Types of Customer Satisfaction**

According to the comparison of expectations, environmental differences and influencing factors, etc. (Gao Shan, 2013), customer satisfaction can be described, which can be summarized into the following three types. Before an actual event occurs, a customer's subjective feelings are better than those when it actually happens, which are called expectation satisfaction. Specific transactional customer satisfaction is limited to the later evaluation on a particular purchase behavior, or a customer's immediate emotional reflection of the degree of value obtained when using a product in a specific environment, which is highly subjective. Based on specific transactional satisfaction, one can deal with the specific diagnostic information of a specific product or service. Cumulative satisfaction is a comprehensive evaluation of customers under the influence of certain influencing factors over a period of time, such as time, price, quality and so on.

### **2.2.3 From Customer Satisfaction to Student Satisfaction**

Customer satisfaction is a part of western consumer behavior satisfaction theories, (Lin Chongde, 2003) whose core lies in the concept of product satisfaction through the perception of service satisfaction. If a customer's satisfaction with a product is high, it can be regarded as a good product. Student satisfaction means regarding higher education as a product, which is education service, and what students perceive is the level of higher education service. Therefore, the concept of student satisfaction is derived from customer satisfaction.

## **2.3 The Theories of the Study**

### **2.3.1 Maslow's Theory of Self-actualization**

Maslow is a representative of the famous "humanistic psychology" school, whose core idea is to take a positive attitude towards the natural factors of human nature from the perspective of psychology. (Maslow, A. H, 1970) It is believed in the theory that humans are born with good talents and dispositions. Friendship, cooperation,

and creation are natural factors of human beings, all of which are given to humans by nature in the process of biological evolution. A reason why people's personalities and abilities are different is the difference in how much they exert their own potential, not that in themselves. Maslow once said that self-realization was the self-exertion of creative potential, and this kind of exertion was the highest need of human beings, which was also the highest goal pursued by humans. People have many other potentials. Maslow also pointed out that self-realization could make a person's potential fully realized, who would thus be physically and mentally happy. On the contrary, the self-realization of suppressing people's potential will greatly distort their body, mind and personality.

We talked about Maslow's self-actualization theory and emphasized that in the process of higher education teaching, we need to pay attention to and understand our students, take them as the center, understand them through scientific methods, and know their likes as well as dislikes together with their views on life. Eliminate their dissatisfaction, develop their potential, and achieve the goal of education as well as teaching in the process of self-realization. College students' satisfaction assessment is one of the most important means and methods to complete this work. The successful satisfaction evaluations of western developed countries also tell us that the "needs" of students are the center of our work.

### **2.3.2 Stakeholder Theory**

Stakeholder theory is based on Penrose's Theory of Enterprise Growth put forward in 1959, that is, "an enterprise is the concept of a collection of human relations and interpersonal relations, which is the cornerstone of the stakeholder theory". (Freeman, 1984) The most famous stakeholder theory today was put forward by Freeman in *Strategic Management: A Stakeholder Approach*:

"The relationship between stakeholders and organizational goals is inseparable, without which no one can achieve a goal." The key to the stakeholder theory is the division of stakeholders, which is divided into two main types: the multi-cone subdivision method, which is divided into shareholders, employees and other related social personnel from the inside to the outside according to the distance of interests.

The Mitchell sub-method is combined with the definition and classification of stakeholders. Any of the legitimacy, rights and urgency in the definition is a stakeholder. Then score from three aspects, one of which is identified as stakeholders, the other two are the prospective stakeholders, and only one of them is the potential stakeholder.

Taking educational activities as an example, universities, society and individuals (including families) are benefit recipients, all of whom are indispensable, so they constitute stakeholders. Society can be subdivided into the Government and other stakeholders. Schools can also be divided into teachers and university management agencies. In terms of educational activities: according to the Mitchell method, school management institutions are stakeholders who legally exercise their rights, which at the

same time have urgency for educational behavior, so the management institutions of universities or colleges are deterministic stakeholders. In the same way, teachers are anticipatory stakeholders with legitimacy and power, and students only have the rights with respect to educational activities, so they are potential stakeholders analogous to others, as is shown in Figure 3.

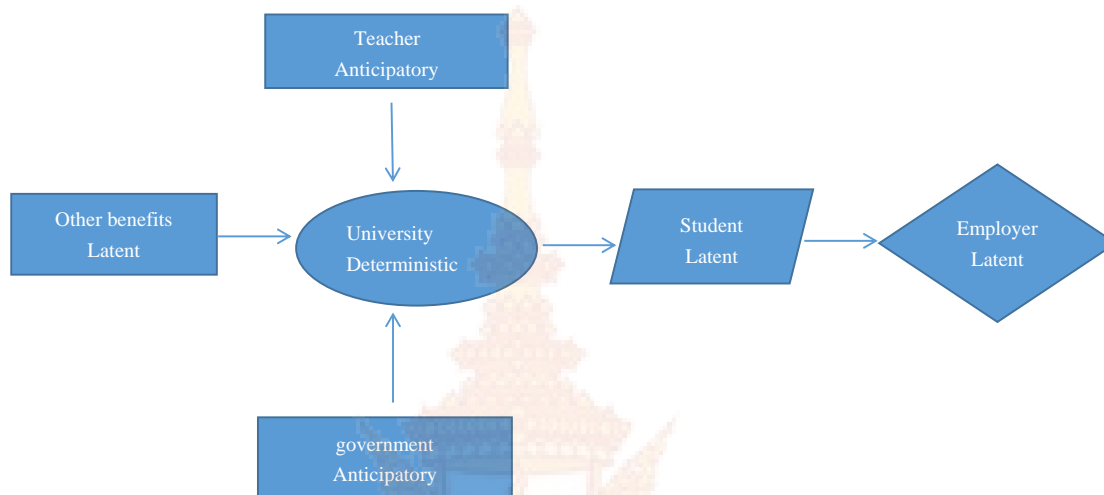


Figure 3. Stakeholders in universities

### 2.3.3 Service-oriented Theory

The service-oriented theory was put forward by Finnish scholar Christie Gness in 1982 on the basis of a large number of empirical studies, whose core is the concept of perceivable quality and a conceptual model of total quality. (Tao Meizhong, 2008) In this theory, there are two points worthy of special attention. First of all, the service quality can be measured by perceptual service. In short, the teaching activities provided by schools to students can be regarded as a kind of service, whose perception measurement is achieved, that is to say, it is feasible to analyze the education and teaching work of a school through the evaluation method of college students' satisfaction. Secondly, in the service process, a user's expected quality is the basis for measuring the actual value. Even if the actual value is high, it is low if customers' feeling is low. In this way, the subjective feelings of a student studying in a school can reflect the quality of its school teaching and the level of its management. (Xu Weiliang, Huang Zhonglin, 2004) Later, American scholar A. Parasuraman and others put forward the 5CAP model, further realizing that there was a gap between school rules and regulations and students' expectations. Such a gap is reflected in the life of students as a way of dissatisfaction of schools or other stakeholders, and the same emotions exist in the expected dissatisfaction of students and teachers as well as between teachers and schools, which are our important evaluation points.

## **2.4 Supporting Theories of Study**

### **2.4.1 Evaluation of British University Students' Satisfaction**

The evaluation of university students' satisfaction in the United Kingdom started very early, and modern British universities have started the evaluation of student satisfaction within themselves very early. (Harvey L, 1997) In 1991, the Center of Research into Quality (CRQ) at the University of Birmingham published the *Student Satisfaction Manual* and created a method of university satisfaction evaluation, exploring the satisfaction of different higher education stakeholders based on seeking to achieve the purpose of improving school management. But in the true sense, the evaluation of college students' satisfaction began in 2005, when there was a formal Government-backed nationwide survey on college students' satisfaction (National Student Survey, NSS). (Crispinus B T, Mori I , 2001), which was the beginning of a systematic study on the evaluation of British college students' satisfaction. However, a late start does not mean that the technologies are backward. The development level of satisfaction evaluation work in the UK is second only to that of the United States, which is very advanced in terms of scale, quantity and technical means.

### **2.4.2 Research Case--NSS**

NSS (The National Student Survey) is a survey of college students' satisfaction conducted by HEFCE (an official educational funding and education quality supervision agency in the United Kingdom). (HEFCE, 2006), which aims to measure the quality of college education and teaching through the survey of evaluations on college students' satisfaction. In order to provide a basis for funding and accountability of universities, the evaluation system is entrusted by the operation of an independent committee set up by Professor Impola. The University of Brie is a specific office. Through public bidding, the well-known investigation agency Ipsos becomes its investigation agency, responsible for specific questionnaire surveys. In 2006, a total of 157,371 college students from 159 universities in England, Wales and Northern Ireland (excluding Scotland, which has its own independent quality assessment system) were surveyed in a NSS survey conducted by the British Foundation Committee. \* SS is the most authoritative and the largest satisfaction evaluation system in the UK.

Through the study of the NSS first-level indicators, it can be seen that through the NSS assessment, the satisfaction of students with learning, life and communication is reproduced and evaluated from three aspects, thereby describing the situation of college students' life, learning and physical as well as mental development. Such dimensions are: 1. Learning dimension, including students' school curriculum study, topic selection, tutor's guidance and general education. 2. Life dimension, including the degree of students' interest in school life and extracurricular activities; 3. Communication dimension, including communication with classmates, research partners and outsiders.

In general, NSS evaluation is a balanced and large-scale satisfaction evaluation system, through which we can fully understand the satisfaction status of British university students from all aspects, involving the main problems in university students' study and life. Through it, you can have a more comprehensive understanding of the quality of colleges and universities, including classroom teaching, topic guidance and practical research in quality research. Finally, the NSS evaluation is also a system for quickly handling the evaluation of college students' satisfaction.

### **2.4.3 Research Case—An Internal Satisfaction Assessment of Limerick University**

Limerick University is known for its internal satisfaction assessment. There are nearly 10,500 students, including more than 6,000 full-time students and more than 3,000 amateur students. Limerick University attaches great importance to internal satisfaction assessment and established a special institution in the school under the leadership of the Executive Principal: the Quality Steering Committee, which is regarded as a school of a permanent establishment. In 2000, Limerick University conducted the first evaluation on undergraduates' satisfaction. A total of 984 students were tested, accounting for about 10% of the total number of students. In 2004, a total of 1895 students were tested, accounting for about 20% of the total number of students. According to the results of the two assessments, most students said that they were highly satisfied with their school.

From the very beginning, Limerick University has established clear working procedures for internal satisfaction evaluation. First of all, the Education Quality Management Committee draws up the principles and objectives of internal evaluation, which will be revised according to the specific conditions of the school at different times. Then they are submitted to the Principal for approval. After passing the test, indicators and scales can be developed. We compared the scale designed by Limerick University in 2004 with the famous American SSI scale and found it a simplified design of the American SSI scale. On the one hand, this ensures that the evaluation results can be compared with the evaluation of American college students' satisfaction. On the other hand, we also found that unnecessary indicators of the SSI scale had been deleted.

Table 2.1 Internal test evaluation scale of Limerick University

1	Student life at school
2	On-campus service
3	Personal training
4	Teaching methods
5	Registration and admission

Table 2.2 SSI scale

1	Academic consulting
2	Safety and security
3	Registration validity
4	Caring for the individuals
5	Admissions and financial assistance
6	Campus atmosphere
7	Student-centered
8	Campus support service
9	Service excellence
10	School life

From the above table, we can find that the “safety” and “defense” in the SSI indicators are not established in the internal assessment of Limerick University. The main reason is that the incidence of violence on Irish campuses is much lower than that in the United States, where students have a relatively high sense of security. In terms of student structure, due to the large number of distance-learning students attending other schools in this university, Limerick University has included “cooperative school running” in the first-level indicators. At the same time, in order to more effectively understand students' views on teaching and teachers' work, the school invites students to directly judge teachers' teaching methods and adds “teaching methods” to the first-level indicators. At the same time, the two indicators "school support service" and "service excellence" in the SSI scale are merged into the indicator "school service" in the school scale.

The evaluation of satisfaction with Limerick University can be used to better solve the practical problems for the school. For example, through the evaluation, it was found that some students went to the on-campus bar more than 3 times a week, which seriously affected their normal learning. The school received this information and immediately closed the school bar. In fact, through internal satisfaction assessments, specific problems in students' school life can be discovered and solved in time. In the processing of questionnaires, due to the small number of samples, Limerick University has adopted a weighted average method to process satisfaction-related data. Compared with the complex mathematical calculations of large-scale evaluations on satisfaction, this saves time and improves efficiency.

## **CHAPTER 3**

### **RESEARCH METHODS**

How to collect and analyze data, research methods, sampling methods, theoretical basis and making questionnaires is mainly studied in this chapter.

#### **3.1 Research Location**

This study is mainly based on Chinese students from UTK and UJN. Since the author is in Bangkok, Thailand, and the school is not open due to COVID-19, the survey of Chinese students in Thailand is mainly conducted in the form of online questionnaire to investigate and collect data.

Regarding the student survey of Chinese universities, the author has asked undergraduate teachers and classmates to conduct the school interview survey on behalf of the author, and data is collected through an online questionnaire survey.

#### **3.2 Research Respondents**

The main research respondents of this study are the university students of UTK International College in Thailand and UJN School of Information in China, who are taken as the research objects. There are no restrictions on gender or age to get more comprehensive data.

#### **3.3 The Research Methods**

##### **3.3.1 Random Sampling**

Through random sampling interviews with college students as well as surveys on college students of different grades, ages, genders and majors, we will have an in-depth understanding of the influencing factors of different students' satisfaction with a college.

##### **3.3.2 Sample Size**

The samples studied in this article are college students of UJN and UTK over 18 years old, who have experienced campus life and can make a complete evaluation of their university. Sample selection is based on random sampling. The number of interviews is expected to involve 400 people. 400 questionnaires will be distributed for research, 200 of which will be distributed to UJN and UTK respectively.

### **3.4 The Questionnaire Design**

The questionnaire begins with greetings and introductions, explaining the intentions and significance of the survey, making it easier for the respondents to start and fill in carefully. The questionnaire is divided into five grades, namely very satisfied, satisfied, moderate, dissatisfied and very dissatisfied. Finally, the five grades of scores are added together to express respondents' satisfaction and authenticity with their school.

The first part is mainly to investigate the personal characteristics and basic information of students, such as gender, age, grade, major and hometown, etc.

The second part is mainly to investigate the basic situation of the schools, such as tuition, admission rate and graduation rate, etc.

The third part is mainly to investigate the teaching conditions, such as school size, school facilities, teachers' quality and curriculum arrangement.

The fourth part is mainly to investigate the school life, such as the scale of the canteen, the quality of the dormitory, campus hygiene and environment, etc.

### **3.5 Data Statistical Analysis**

According to the survey and data collection on student satisfaction in this study, we will use valid data to analyze research purposes. In this research, Microsoft Excel and SPSS are mainly used for data entry and analysis, and the research results are obtained based on the data collected.

### **3.6 Factor Analysis**

Factor analysis refers to the study of statistical techniques to extract common factors from groups of variables, which was first proposed by British psychologist C.E. Spearman. He found that there was a certain correlation among the scores of students in various subjects. Students with good scores in one subject often have better scores in other subjects, so that whether there are some potential common factors or general intelligence conditions can be inferred, affecting students' academic performance. Through factor analysis, hidden representative factors can be found among many variables. By grouping variables of the same nature into one factor, the number of variables is reduced and hypotheses about relationships among variables are tested.

$\mathbf{X} = (X_1, X_2, \dots, X_p)^T$  Factor analysis is a statistical method through which high-dimensional data is simplified and analyzed. Suppose that the p-dimensional random vector is satisfied,  $\vec{f} = (f_1, f_2, \dots, f_q)^T$  is a q-dimensional random variable,  $q \leq p$ , satisfy  $E\vec{f} = \mathbf{0}$ ,  $E\vec{f}\vec{f}^T = \vec{I}_q$ , whose component  $f_i$  is called the common factor, which works for every component of X.  $\vec{e} = (e_1, e_2, \dots, e_p)^T$  is a p-dimensional unobservable random vector, and q is satisfied with

$$E\vec{e} = \mathbf{0}, E\vec{e}\vec{e}^T = \text{diag}(\sigma_1^2, \sigma_2^2, \dots, \sigma_p^2) \equiv \sum_{\text{and}} E\vec{f}\vec{e}^T = \mathbf{0}.$$

The component  $\vec{e}_i$  of  $\vec{e}$  is called a special factor, which only works on the component  $X_i$  of X.  $\mu$  and A are the parameter matrices.

If X satisfies the above equations, then the random vector X has a factor structure.

At this time, it is easy to calculate  $\text{Var}(X) = \vec{A}\vec{A}^T + \sum$ .

Matrix A is called the factor load, whose element  $a_{ij}$  is the load of the component i

$\vec{X}_i$  on  $f_j$  of the factor j, recorded as  $h_i^2 = \sum_{j=1}^q a_{ij}^2$ . Then there is the formula sub

$$\text{Val}(X_i) = h_i^2 + \sigma_i^2.$$

Thus,  $h_i^2$  reflects the influence of common factors on  $\vec{X}_i$ , known as the "contribution"

of common factor  $\vec{X}_i$ . When  $h_i^2 \geq \sigma_i^2$ , it indicates that the effect of the common

factor on  $\vec{X}_i$  is greater than that of the special factor  $\vec{e}_i$ . It can also be seen that  $h_i^2$

reflects the dependence of component  $\vec{X}_i$  on the common factor  $f_j$ .

On the other hand, a specified common factor  $f_j$  is specified, recorded as

$$g_j^2 = \sum_{i=1}^p a_{ij}^2,$$

which is called the contribution of the common factor  $f_j$  on X. The

larger the value of  $g_j^2$  is, the greater the effect of the common factor  $f_j$  on X will

be, so  $g_j^2$  is a measure of the importance of the common factor.

### 3.7 Chi-square Test

Chi-square test is a very widely used hypothesis testing method, whose application in the statistical inference of categorical data includes chi-square tests and correlation analyses of categorical data for the comparison between two rates or constituent ratios, or that among multiple rates or constituent ratios. The chi-square test shows the degree of deviation between the actually observed value of the statistical samples and the theoretically inferred value. The degree of deviation between the actually observed value and the theoretically inferred value determines the size of the chi-square value. If the chi-square value is larger, the deviation degree between the two is greater; on the contrary, the smaller the deviation is between the two; if the two values are completely equal, the chi-square value is 0, indicating that the theoretical value is completely consistent.

(1) Propose the null hypothesis:

H<sub>0</sub>: The distribution function of the population X is F(x).

If the population distribution is discrete, it is assumed that the specific

H<sub>0</sub>: The distribution law of the population X is  $P\{X=x_i\}=p_i, i=1, 2, \dots$

(2) Divide the value range of the overall X into k disjoint small intervals A<sub>1</sub>, A<sub>2</sub>, A<sub>3</sub>, ..., A<sub>k</sub>, if desired

$A_1=(a_0, a_1], A_2=(a_1, a_2], \dots, A_k=(a_{k-1}, a_k),$

Among them,  $a_0$  can be  $-\infty$ ,  $a_k$  can be  $+\infty$ , the division of the intervals depends on specific situations, but the number of sample values contained in each small interval should not be less than 5, and the number of intervals k should be neither too large nor too small.

(3) Denote the number of sample values of A<sub>i</sub> that fall into the i<sup>th</sup> cell interval as f<sub>i</sub>, which becomes the group frequency (true value), and the sum of all group frequencies  $f_1+f_2+\dots+f_k$  is equal to the sample size n.

(4) When H<sub>0</sub> is true, according to the assumed overall theoretical distribution, the probability p<sub>i</sub> of the value of the population X falling into the i<sup>th</sup> cell interval A<sub>i</sub> can be calculated, so np<sub>i</sub> is the theoretical frequency (theoretical value) of sample value falling into the i<sup>th</sup> cell interval A<sub>i</sub>.

(5) When H<sub>0</sub> is true, the frequency f<sub>i</sub>/n of the sample value falling into the i<sup>th</sup> cell A<sub>i</sub> in n trials should be very close to the probability p<sub>i</sub>; when H<sub>0</sub> is not true, then f<sub>i</sub>/n and p<sub>i</sub> are very different. Based on this idea, Pearson introduced the following test

statistic 
$$\chi^2 = \sum_{i=1}^k \frac{(f_i - np_i)^2}{np_i}$$
, which obeys the chi-square distribution with k-1 degrees of freedom when Hypothesis 0 holds.

### 3.8 Questionnaire Analysis

In this survey on students from two schools, each school issued 220 and 440 questionnaires respectively. Through data pretreatment, some invalid questionnaires were eliminated and 411 valid ones were obtained, among which UJN issued 210 copies, and UTK issued 201 copies, with an effective rate of 93.4%. Statistical design quality is the primary link to ensure the quality of statistical data, which plays a key role in the statistical data quality assurance system. In a questionnaire survey, the most concerned investigator is the measurement ability of the questionnaire, which includes two aspects, namely the accuracy and effectiveness of the questionnaire measurement results. Accuracy and validity are the two most important features of statistical data quality. A good questionnaire design can not only guarantee reliable data results, namely the accuracy, but also reflect the objective reality of validity. Therefore, the design quality of a questionnaire is particularly important for testing the reliability and validity. On this basis, by constantly improving questionnaire design and its measurement ability, it will eventually help us to get high-quality survey data. Usually, we use the reliability and validity analysis of questionnaires to evaluate their measurement ability, thus realizing the test on the quality of questionnaire design. Usually, we perform a reliability and validity analysis on existing questionnaire data before making a questionnaire analysis.

### 3.9 Credit and Validity Analysis

A confidence validity analysis was conducted on the questionnaire data before performing the questionnaire analysis.

#### 3.9.1 Confidence Test

In this study, the internal consistency coefficient (Cronbach's Alpha coefficient) table was used to test the reliability of the data. Usually the Cronbach's Alpha coefficient is between 0 and 1. If the coefficient does not exceed 0.6, the internal consensus reliability is generally considered to be insufficient; at 0.7-0.8, the scale has a comparable reliability, and at 0.8-0.9, the scale reliability is very good. Three dimensions of the data (verbal intention, verbal behavior, non-verbal behavior) were analyzed through SPSS24.0, and the results are shown in the following figure:

Table 3.1 Reliability test of satisfaction with campus

Reliability Statistics	
Cronbach's Alpha	N of Items
0.702	9

Obviously, the Cronbach's value of the questionnaire was greater than 0.7, indicating a good internal consistency of each questionnaire question and the suitability for further questionnaire analysis.

### 3.9.2 Validity Test

First of all, the raw data was tested using the KMO and Bartlett metrics, based on which whether the sample data met the conditions of the validity analysis was determined. The KMO value is an indicator for comparing the correlation coefficient value with the partial correlation coefficient value, which is between 0.5 and 1, meaning that the samples meet the validity analysis conditions. If the value is less than 0.5, the cooperative validity analysis is considered inappropriate. The data was analyzed through SPSS24.0 and the results are shown below:

Table 3.2 Validity test of college students' satisfaction with campus

KMO and Bartlett's Test		
Kaiser-Meyer-Olkin Measure of Sampling Adequacy		0.695
Bartlett's Test of Sphericity	Approx. Chi-Square	787.516
	df	36
	Sig.	0.000

The KMO value of the questionnaire was 0.695, the KMO and p-value of Bartlett's Test of Sphericity were much less than 0.05, rejecting the null hypothesis, thus indicating that the questionnaire data had a good validity, which allowed for a statistical analysis.

Table 3.3 Total variance interpretation

Total variance interpretation									
Ingredient	Initial eigenvalue			Extract the sum of load squares			Square and sum of the rotating load		
	Amount to	Variance percentage	Accumulate %	Amount to	Variance percentage	Accumulate %	Amount to	Variance percentage	Accumulate %
1	2.779	30.876	30.876	2.779	30.876	30.876	2.158	23.978	23.978
2	1.61	17.888	48.764	1.61	17.888	48.764	1.78	19.782	43.761
3	1.14	12.668	61.432	1.14	12.668	61.432	1.59	17.671	61.432
4	0.837	9.297	70.729						
5	0.803	8.926	79.655						
6	0.56	6.224	85.879						
7	0.469	5.209	91.088						
8	0.433	4.817	95.904						
9	0.369	4.096	100						

Table 3.4 Rotated component matrix

	Ingredient		
	1	2	3
Are you satisfied with the teaching methods of this major course	0.222	0.657	-0.1
Are you satisfied with the assessment methods of this major course	0.118	0.86	-0.005
Are you satisfied with the teaching quality of your major	0.017	0.73	0.096
Are you satisfied with the campus environment of the school	-0.051	0.037	0.829
Are you satisfied with the school restaurant environment	0.488	0.063	0.651
Are you satisfied with the accommodation conditions of the school	0.114	-0.056	0.648

Are you satisfied with the logistics management of the school	0.711	0.208	0.182
Are you satisfied with the campus health of the school	0.789	0.155	0.013
Are you satisfied with the school's tuition fee, award system and funding system	0.845	0.026	0.086

### 3.10 Demographic Characteristics

Table 3.5 The survey questionnaire has its demographic characteristics

Variable	Classification	Number of people	Percentage %
Sex	Man	217	52.8
	Woman	194	47.2
Grade	Freshman	32	7.8
	Sophomore	84	20.4
	Junior	107	26
	Senior	83	20.2
	Master's degree or above	105	25.5
School	UJN	210	51.1
	UTK	201	48.9

Basic demographic characteristics: 411 respondents; the male-female ratio is about 1.12:1.

The number of respondents in the UK was 210, 51.1%, 201, 48.9%, 411, which was the largest, accounting for 71.8%. Overall, there was little difference between men and women, and the survey was mainly aimed at senior college students.

### 3.11 Analysis of College Students' Satisfaction with the Campus

#### 3.11.1 Descriptive Statistical Analysis

A total of 411 questionnaires were collected and the survey was on of college students' satisfaction with their campus. In this paper, the respondents are investigated from three dimensions, namely satisfaction with course teaching, satisfaction with humanities environment and satisfaction with campus management, including satisfaction with teaching methods, teaching quality and course assessment; satisfaction with campus environment, restaurant environment, accommodation conditions and campus management includes logistics management, campus health, tuition and scholarship system.

Table 3.6 Descriptive statistical analysis of satisfaction in three dimensions

Degree of satisfaction	N	Minimum	Maximum	Mean	Std. deviation
Curriculum teaching	411	1.00	5.00	3.49	0.81
Cultural environment	411	1.00	5.00	3.77	0.75
Campus management	411	1.00	5.00	3.29	0.97

From the above table, the minimum value of course teaching is 1, the maximum value is 5, and the standard deviation is 0.81, indicating that the degree of dispersion is small; the minimum value of human environment is 1, the maximum value is 5, and the standard deviation is 0.75; the minimum value of non-oral behavior is 1, the maximum value is 5, the standard deviation is 0.97, and the dispersion degree is small, indicating that the gap is small.

### 3.11.2 Correlation Analysis

Table 3.7 Statistical analysis in three dimensions

	Curriculum teaching	Cultural environment	Campus management
Curriculum teaching	1	0.177**	0.460**
Cultural environment	0.177**	1	0.376**
Campus management	0.460**	0.376**	1

\*Correlation is significant at the level of 0.05 (2-tailed).

\*\*Correlation is significant at the level of 0.01 (2-tailed).

According to the above figure, the correlation coefficient of course teaching and humanistic environment is 0.177, which passes the significance test of 1%; the correlation coefficient of course teaching and campus management is 0.460, which passes the significance test of 1%, and that of humanistic environment as well as campus management is 0.376, passing the significance test of 1%. Through the above analysis, the correlation among the three satisfaction levels is strong. Therefore, a series of research hypotheses are proposed in this paper based on the induction of influencing factors:

*H1: The teaching methods of professional courses have a positive impact on the evaluation of college students' satisfaction with their campus.*

*H2: The assessment methods of professional courses have a positive impact on the evaluation of college students' satisfaction with their campus.*

*H3: The quality of professional teaching has a positive impact on the evaluation of college students' satisfaction with their campus.*

*H4: The campus environment has a positive impact on the evaluation of college students' satisfaction with their campus.*

*H5: The restaurant environment has a positive impact on the evaluation of college students' satisfaction with their campus.*

*H6: Accommodation conditions have a positive impact on the evaluation of college students' satisfaction with their campus.*

*H7: Logistics management has a positive impact on the evaluation of college students' satisfaction with their campus.*

*H8: Campus hygiene has a positive impact on the evaluation of college students' satisfaction with their campus.*


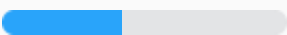
*H9: Tuition fees, scholarships and financial aid systems have a positive impact on the evaluation of college students' satisfaction with their campus.*

## CHAPTER 4

### DATA ANALYSIS RESULTS

#### 4.1 A Questionnaire of College Students' Satisfaction (UTK)

##### Your gender: [single-choice]

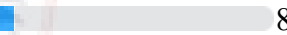
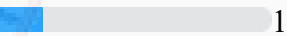
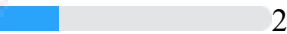
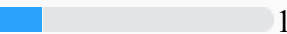
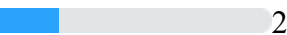
Option	Subtotal	Scale
Man	100	 47.61%
Woman	110	 52.39%
This question is effectively filled in by the person-time	210	

Notes: N=210

Source: Calculated based on questionnaires

Men account for 47.61% and women 52.39%.

##### The grade you are reading now [single-choice]

Option	Subtotal	Scale
First grade	24	 8.75%
Second grade	41	 19.52%
Junior grade	57	 27.14%
Senior grade	36	 17.14%
Master's degree or above	52	 24.76%
This question is effectively filled in by the person-time	210	

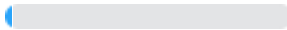
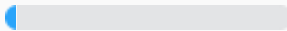
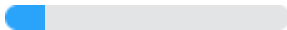
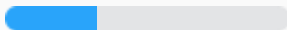

Notes: N=210

Source: Calculated based on questionnaires

As is shown in the table above, students of different ages actively participated in the questionnaire.

**Are you satisfied with the current major [scale question]**

**Average score: 4.16**

Option	Subtotal	Scale
Very dissatisfied	7	 3.33%
Discontent	10	 4.76%
Secondary	27	 12.85%
Satisfied	71	 33.8%
Very satisfied	95	 45.23%
This question is effectively filled in by the person-time	210	

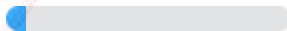
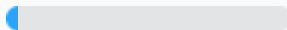
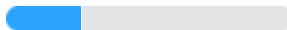
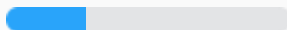
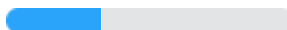
Notes: N=210

Source: Calculated based on questionnaires

As is shown in the table above, students of UTK are more satisfied with their current major.

**Are you satisfied with the tuition fee [scale question]**

**Average score of this question: 3.76**

Option	Subtotal	Scale
Very dissatisfied	15	 7.14%
Discontent	11	 5.23%
Secondary	48	 22.85%
Satisfied	59	 28.09%
Very satisfied	67	 31.9%
This question is effectively filled in by the person-time	210	

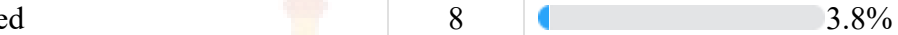
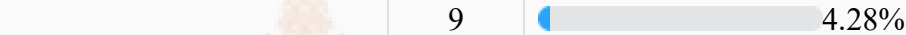
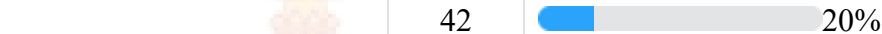
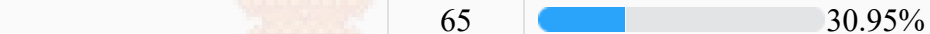

Notes: N=210

Source: Calculated based on questionnaires

As is shown in the table above, students of UTK are more satisfied with the tuition fee.

**Are you satisfied with the school's admission rate [scale question]**

**Average score: 4.01**

Option	Subtotal	Scale
Very dissatisfied	8	 3.8%
Discontent	9	 4.28%
Secondary	42	 20%
Satisfied	65	 30.95%
Very satisfied	86	 40.95%
This question is effectively filled in by the person-time	210	

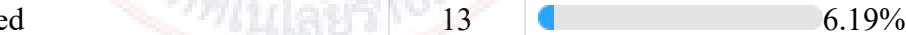
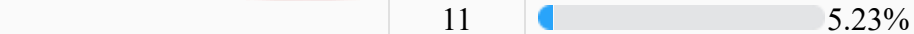
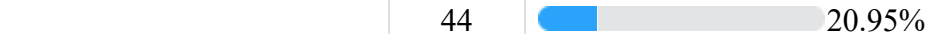
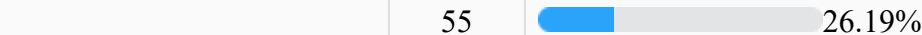

Notes: N=210

Source: Calculated based on questionnaires

As is shown in the table above, students of UTK are more satisfied with the school's admission rate.

**Are you satisfied with the school's graduation rate [scale question]**

**Average score of this question: 3.92**

Option	Subtotal	Scale
Very dissatisfied	13	 6.19%
Discontent	11	 5.23%
Secondary	44	 20.95%
Satisfied	55	 26.19%
Very satisfied	87	 41.42%
This question is effectively filled in by the person-time	210	






Notes: N=210

Source: Calculated based on questionnaires

As is shown in the table above, students of UTK are more satisfied with the school's graduation rate.

**Are you satisfied with the school's facilities [scale question]**

**Average score of this question: 3.91**

Option	Subtotal	Scale
Very dissatisfied	9	 4.25%
Discontent	14	 6.66%
Secondary	48	 22.85%
Satisfied	66	 31.42%
Very satisfied	71	 33.8%
This question is effectively filled in by the person-time	210	

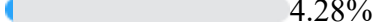
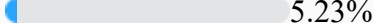
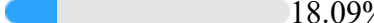
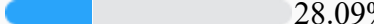
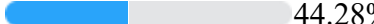
Notes: N=210

Source: Calculated based on questionnaires

As is shown in the table above, students of UTK are more satisfied with the school's facilities.

**Are you satisfied with the quality of school teachers [scale question]**

**Average score: 4.06**

Option	Subtotal	Scale
Very dissatisfied	9	 4.28%
Discontent	11	 5.23%
Secondary	38	 18.09%
Satisfied	59	 28.09%
Very satisfied	93	 44.28%
This question is effectively filled in by the person-time	210	

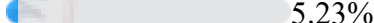
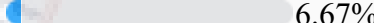
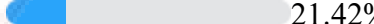
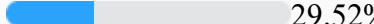
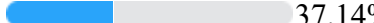
Notes: N=210

Source: Calculated based on questionnaires

As is shown in the table above, students of UTK are more satisfied with the quality of school teachers.

**Are you satisfied with the size of the school [scale question]**

**Average score of this question: 3.93**

Option	Subtotal	Scale
Very dissatisfied	11	 5.23%
Discontent	14	 6.67%
Secondary	45	 21.42%
Satisfied	62	 29.52%
Very satisfied	78	 37.14%
This question is effectively filled in by the person-time	210	

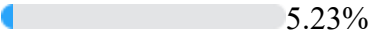
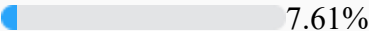
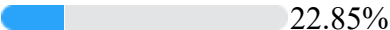
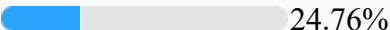
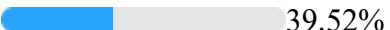
Notes: N=210

Source: Calculated based on questionnaires

As is shown in the table above, students of UTK are more satisfied with the size of the school.

**Are you satisfied with the school's curriculum schedule [scale question]**

**Average score of this question: 3.92**

Option	Subtotal	Scale
Very dissatisfied	11	 5.23%
Discontent	16	 7.61%
Secondary	48	 22.85%
Satisfied	52	 24.76%
Very satisfied	83	 39.52%
This question is effectively filled in by the person-time	210	

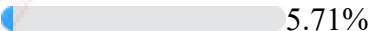
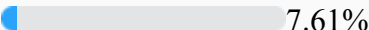
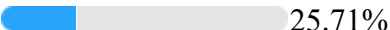
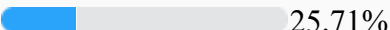
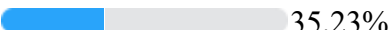
Notes: N=210

Source: Calculated based on questionnaires

As is shown in the table above, students of UTK are more satisfied with the school's curriculum schedule.

**Are you satisfied with the size of the school canteen [scale question]**

**Average score of this question: 3.83**

Option	Subtotal	Scale
Very dissatisfied	12	 5.71%
Discontent	16	 7.61%
Secondary	54	 25.71%
Satisfied	54	 25.71%
Very satisfied	74	 35.23%
This question is effectively filled in by the person-time	210	


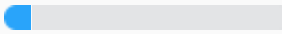
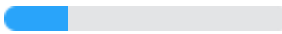
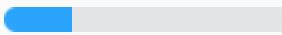
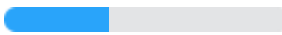
Notes: N=210

Source: Calculated based on questionnaires

As is shown in the table above, students of UTK are more satisfied with the size of the school canteen.

**Are you satisfied with the quality of the school dormitory [scale question]**

**Average score of this question: 3.77**

Option	Subtotal	Scale
Very dissatisfied	16	 7.61%
Discontent	25	 11.9%
Secondary	44	 20.95%
Satisfied	48	 22.85%
Very satisfied	77	 36.66%
This question is effectively filled in by the person-time	210	

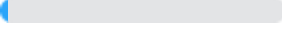
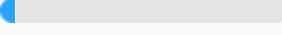
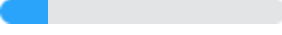
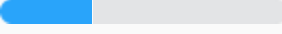
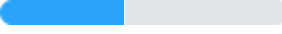
Notes: N=210

Source: Calculated based on questionnaires

As is shown in the table above, students of UTK are more satisfied with the school dormitory.

**Are you satisfied with the campus health of the school [scale question]**

**Average score: 4.07**

Option	Subtotal	Scale
Very dissatisfied	8	 3.81%
Discontent	13	 6.19%
Secondary	34	 16.19%
Satisfied	63	 33.34%
Very satisfied	92	 43.8%
This question is effectively filled in by the person-time	210	


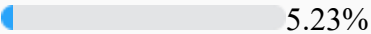
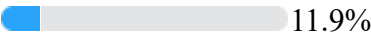
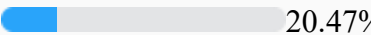
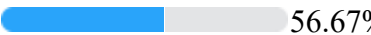
Notes: N=210

Source: Calculated based on questionnaires

As is shown in the table above, students of UTK are more satisfied with the campus health of the school.

**Are you satisfied with the ambient weather of the school [scale question]**

**Average score of this question: 4.22**

Option	Subtotal	Scale
Very dissatisfied	12	 5.71%
Discontent	11	 5.23%
Secondary	25	 11.9%
Satisfied	43	 20.47%
Very satisfied	119	 56.67%
This question is effectively filled in by the person-time	210	


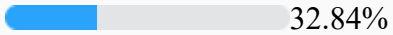
Notes: N=210

Source: Calculated based on questionnaires

As is shown in the table above, students of UTK are more satisfied with the ambient weather of the school.

**College Student Satisfaction Questionnaire (UJN)**

**Your gender: [single-choice]**

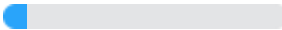
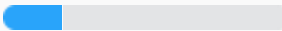
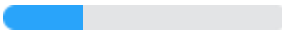
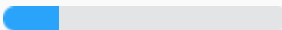
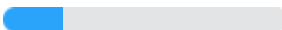
Option	Subtotal	Scale
Man	135	 67.16%
Woman	66	 32.84%
This question is effectively filled in by the person-time	201	

Notes: N=201

Source: Calculated based on questionnaires

Men account for 67.16% and women 32.84%.

### The grade you are reading now [single-choice]

Option	Subtotal	Scale
First grade	11	 5.47%
Second grade	43	 21.39%
Junior grade	62	 30.85%
Senior grade	41	 20.40%
Master's degree or above	44	 21.89%
This question is effectively filled in by the person-time	201	

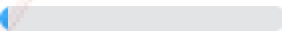
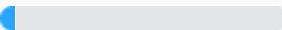
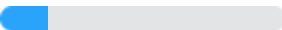
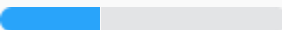
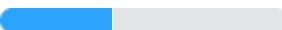
Notes: N=201

Source: Calculated based on questionnaires

As is shown in the table above, students of different ages actively participated in the questionnaire.

### Are you satisfied with the current majors [scale question]

Average score of this question: 4

Option	Subtotal	Scale
Very dissatisfied	9	 4.48%
Discontent	10	 4.98%
Secondary	33	 16.42%
Satisfied	66	 32.84%
Very satisfied	83	 41.29%
This question is effectively filled in by the person-time	201	

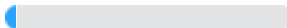
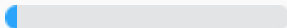
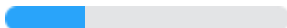
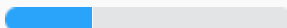
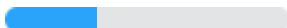
Notes: N=201

Source: Calculated based on questionnaires

As is shown in the table above, students of UJN are more satisfied with the current majors.

**Are you satisfied with the tuition fee [scale question]**

**Average score of this question: 3.84**

Option	Subtotal	Scale
Very dissatisfied	9	 4.48%
Discontent	11	 5.47%
Secondary	50	 24.88%
Satisfied	58	 28.86%
Very satisfied	73	 36.32%
This question is effectively filled in by the person-time	201	

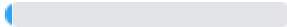
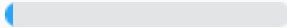
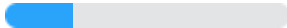
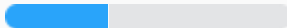
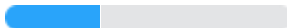
Notes: N=201

Source: Calculated based on questionnaires

As is shown in the table above, students of UJN are more satisfied with the tuition fee.

**Are you satisfied with the school's admission rate [scale question]**

**Average score of this question: 3.96**

Option	Subtotal	Scale
Very dissatisfied	6	 2.99%
Discontent	8	 3.98%
Secondary	44	 21.89%
Satisfied	75	 37.31%
Very satisfied	68	 33.83%
This question is effectively filled in by the person-time	201	

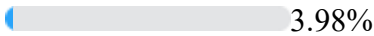
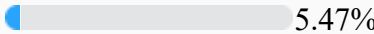
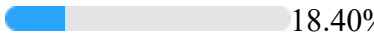
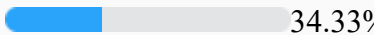
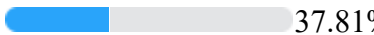
Notes: N=201

Source: Calculated based on questionnaires

As is shown in the table above, students of UJN are more satisfied with the school's admission rate.

**Are you satisfied with the school's graduation rate [scale question]**

**Average score of this question: 3.95**

Option	Subtotal	Scale
Very dissatisfied	8	 3.98%
Discontent	11	 5.47%
Secondary	37	 18.40%
Satisfied	69	 34.33%
Very satisfied	76	 37.81%
This question is effectively filled in by the person-time	201	

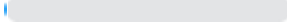
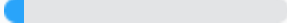
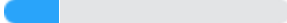
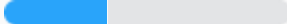
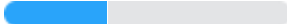
Notes: N=201

Source: Calculated based on questionnaires

As is shown in the table above, students of UJN are more satisfied with the school's graduation rate.

**Are you satisfied with the school's facilities [scale question]**

**Average score of this question: 3.98**

Option	Subtotal	Scale
Very dissatisfied	3	 1.15%
Discontent	19	 9.45%
Secondary	31	 15.42%
Satisfied	74	 36.82%
Very satisfied	74	 36.82%
This question is effectively filled in by the person-time	201	

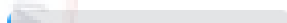
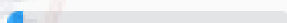
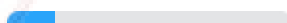
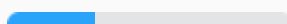
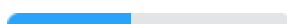
Notes: N=201

Source: Calculated based on questionnaires

As is shown in the table above, students of UJN are more satisfied with the school's facilities.

**Are you satisfied with the quality of school teachers [scale question]**

**Average score: 4.09**

Option	Subtotal	Scale
Very dissatisfied	5	 2.49%
Discontent	15	 7.46%
Secondary	27	 13.43%
Satisfied	62	 30.85%
Very satisfied	92	 45.77%
This question is effectively filled in by the person-time	201	

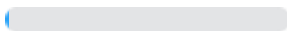
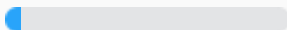
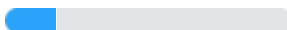
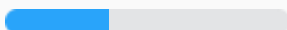
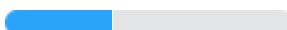
Notes: N=201

Source: Calculated based on questionnaires

As is shown in the table above, students of UJN are more satisfied with the quality of school teachers.

**Are you satisfied with the size of the school [scale question]**

**Average score: 4.02**

Option	Subtotal	Scale
Very dissatisfied	4	 1.99%
Discontent	15	 7.46%
Secondary	28	 13.93%
Satisfied	76	 37.81%
Very satisfied	78	 38.81%
This question is effectively filled in by the person-time	201	

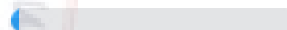
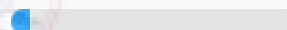
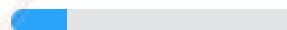
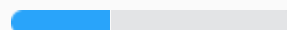
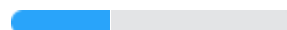
Notes: N=201

Source: Calculated based on questionnaires

As is shown in the table above, students of UJN are more satisfied with the size of the school.

**Are you satisfied with the school's curriculum schedule [scale question]**

**Average score of this question: 3.91**

Option	Subtotal	Scale
Very dissatisfied	8	 3.98%
Discontent	16	 7.96%
Secondary	39	 19.4%
Satisfied	69	 34.32%
Very satisfied	69	 34.32%
This question is effectively filled in by the person-time	201	

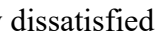



Notes: N=201

Source: Calculated based on questionnaires

As is shown in the table above, students of UJN are more satisfied with the school's curriculum schedule.

**Are you satisfied with the size of the school canteen [scale question]**

**Average score of this question: 3.8**

Option	Subtotal	Scale
Very dissatisfied	8	 3.98%
Discontent	14	 6.96%
Secondary	59	 29.35%
Satisfied	56	 27.86%
Very satisfied	64	31.84%
This question is effectively filled in by the person-time	201	


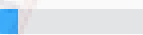


Notes: N=201

Source: Calculated based on questionnaires

As is shown in the table above, students of UJN are more satisfied with the size of the school canteen.

**Are you satisfied with the quality of the school dormitory [scale question]**

**Average score of this question: 3.78**

Option	Subtotal	Scale
Very dissatisfied	7	 3.48%
Discontent	22	 10.94%
Secondary	53	 26.36%
Satisfied	53	 26.36%
Very satisfied	66	32.83%
This question is effectively filled in by the person-time	201	

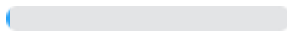
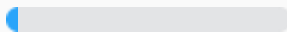
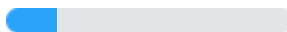
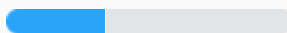
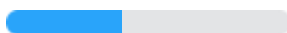
Notes: N=201

Source: Calculated based on questionnaires

As is shown in the table above, students of UJN are more satisfied with the quality of the school dormitory.

**Are you satisfied with the campus health of the school [scale question]**

**Average score: 4.09**

Option	Subtotal	Scale
Very dissatisfied	4	 1.99%
Discontent	12	 5.97%
Secondary	36	 17.91%
Satisfied	69	 34.32%
Very satisfied	80	 39.8%
This question is effectively filled in by the person-time	201	

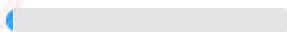
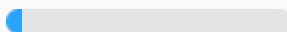
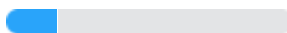
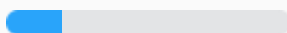

Notes: N=201

Source: Calculated based on questionnaires

As is shown in the table above, students of UJN are more satisfied with the campus health of the school.

**Are you satisfied with the ambient weather of the school [scale question]**

**Average score: 4.15**

Option	Subtotal	Scale
Very dissatisfied	7	 3.48%
Discontent	15	 7.46%
Secondary	31	 15.42%
Satisfied	37	 18.41%
Very satisfied	101	 50.24%
This question is effectively filled in by the person-time	201	

Notes: N=201

Source: Calculated based on questionnaires

As is shown in the table above, UJN students are more satisfied with the ambient weather of the school.

## **4.2 An Analysis of Factor of College Students' Satisfaction with Campus**

To further understand the evaluation of satisfaction with campus, we conducted a factor analysis to find whether common factors influenced respondents' satisfaction evaluation. The results showed that all the 9 variables were highly correlated. The Bartlett spherical test ( $df=36$   $p=0.00 < 0.001$ ) and a Cronbach  $\alpha$  value of 0.695 indicated that this dataset could be used for factor analysis.  $\chi^2 = 787.516$  The principal component factor method was used to extract the common factors. As is seen in the following table, the last three common factors are obtained, whose cumulative contribution rate is 61.432%, which can quite well explain the information contained from the original variables. According to the rotating component matrix, "logistics management", "campus health", "tuition, scholarship and funding system" are loaded on the first main factor called "satisfaction with campus management"; the indicators "teaching methods", "teaching assessment methods" and "teaching quality" are the second main factor, namely "satisfaction with curriculum teaching"; "campus environment", "catering environment" and "accommodation condition" are the third main factor, namely "satisfaction with humanistic environment".

## **4.3 Analysis of Satisfaction with Colleges in China and Thailand**

### **4.3.1 Card-square Test of College Students' Age and Their Satisfaction with Campus**

Gender was tested with the satisfaction with "professional course teaching methods, professional course assessment methods, professional teaching quality, campus environment, restaurant environment, accommodation conditions, logistics management, campus health, tuition bonus and funding system", and the results are as follows:

Results of chi-square test for age with each variable

Variable	$\chi^2$ price	Significance (P-value)	Whether there is a significant difference among the cases
Satisfaction with professional course teaching methods	85.798	0.071	Yes
Satisfaction with professional course assessment methods	72.432	0.334	Deny
Satisfaction with professional teaching quality	79.350	0.163	Deny
Satisfaction with campus environment	65.080	0.947	Deny
Satisfaction with restaurant environment	91.601	0.030	Yes
Satisfaction with accommodation condition	62.556	0.664	Deny
Satisfaction with logistics management	84.048	0.091	Deny
Satisfaction with campus health	91.155	0.032	Yes
Satisfaction with tuition and bonus funding system	65.848	0.551	Deny

According to the above table, the cross-value of "age" and "satisfaction with professional course teaching " as well as "satisfaction with logistics management " was 85.798 and 84.048 respectively. The corresponding p-value was 0.071 and 0.091, less than 10%, which passed the significance test of 10%. The cross-value of "age" and "satisfaction with campus health" was 91.601 and 91.155 respectively, whose corresponding p-value was 0.030 and 0.032, less than 5%, passing the significance test of confidence of 5%. However, the p-value of "age" and other variables was greater

than 0.1, which failed the significance test, indicating that there was no significant difference between "age" and other variables. There were significant differences between "age" and "satisfaction with professional course teaching style", "satisfaction with restaurant environment", "satisfaction with logistics management" as well as "satisfaction with campus health".

#### 4.3.2 Card-square Test of College Students' Gender and Their Satisfaction with Campus

Gender was tested with the satisfaction with "professional course teaching methods, professional course assessment methods, professional teaching quality, campus environment, restaurant environment, accommodation conditions, logistics management, campus health, tuition bonus and funding system", and the results are as follows.

Results of the satisfaction chi-square test for gender versus each variable

Variable	$\chi^2$ price	Significance (P-value)	Whether there is a significant difference among the cases
Satisfaction with professional course teaching methods	7.401	0.116	Deny
Satisfaction with professional course assessment methods	2.794	0.593	Deny
Satisfaction with professional teaching quality	1.600	0.809	Deny
Satisfaction with campus environment	5.510	0.357	Deny
Satisfaction with restaurant environment	3.261	0.515	Deny
Satisfaction with accommodation condition	3.337	0.503	Deny
Satisfaction with logistics management	8.999	0.061	Yes

Satisfaction with campus health	13.064	0.011	Yes
Satisfaction with tuition and bonus funding system	17.509	0.002	Yes

As can be seen from the above table, the cross-square value of "gender", "satisfaction with campus health" and "satisfaction with tuition bonus subsidy system" was 13.064 and 17.509 respectively, and the corresponding p-value was 0.011 and 0.002 respectively, which passed the significance test of 5%; the cross-square value of "gender" and "satisfaction with logistics management" was 8.999, and the corresponding p-value was 0.061, which passed the significance test of 10%.

The p-values of the chi-square tests for "gender" and "satisfaction with professional course teaching mode", "satisfaction with professional course assessment mode", "satisfaction with professional teaching quality", "satisfaction with campus environment", "satisfaction with restaurant environment", "satisfaction with accommodation conditions"

were greater than 0.1, which failed the significance test, thus indicating that there was no significant difference between sex and these variables. There were significant differences between "gender" and the variables "satisfaction with campus health care", "satisfaction with tuition bonus funding system" as well as "satisfaction with logistics management".

#### **4.3.3 Card-square Test of Satisfaction with Campus in China and Thailand**

The satisfaction with a school is correlated with the factors "professional course teaching methods, professional course assessment methods, professional teaching quality, campus environment, restaurant environment, accommodation conditions, management, logistics management, campus health, tuition bonus and funding system", and the results are as follows:

Results of chi-square satisfaction test between Chinese and Thai universities and various variables

Variable	$\chi^2$ price	Significance (p-value)	Whether there is a significant difference among the cases or not
Satisfaction with professional course teaching methods	14.689	0.005	Yes
Satisfaction with professional course assessment methods	14.477	0.006	Yes
Satisfaction with professional teaching quality	6.271	0.180	Deny
Satisfaction with campus environment	1.464	0.917	Deny
Satisfaction with restaurant environment	4.352	0.360	Deny
Satisfaction with accommodation condition	10.904	0.028	Yes
Satisfaction with logistics management	9.266	0.055	Yes
Satisfaction with campus health	12.560	0.014	Yes
Satisfaction with tuition and bonus funding system	1.078	0.898	Deny

According to the table above, the cross-analysis value of "school", "satisfaction with professional course teaching methods" and "professional course assessment methods" was 14.689 and 14.477 respectively, whose corresponding p-value was 0.005 and 0.006, all of which were less than 0.01. The significance test with a confidence level of 1% was passed; the chi-square value of the cross-analysis of "school", "satisfaction with accommodation " and "satisfaction with campus hygiene" was 10.904 and 12.560 respectively, and the corresponding p value was 0.028 and 0.014, both of which were less than 0.05, passing the significance test with a confidence level of 5%; the chi-square value of the cross-analysis on "school" and "satisfaction with logistics management" was 9.266, the corresponding p value was 0.055, less than 0.1, which passed the confidence. The p-values corresponding to the cross-analysis of "school", "satisfaction with professional teaching quality", "satisfaction with campus environment", "satisfaction with restaurant environment" and "satisfaction with tuition bonus subsidy system" were all greater than 0.1, failing the significance test, indicating that there was no difference between "school" and the variables "satisfaction with professional teaching quality", "satisfaction with campus environment", "satisfaction with restaurant environment" and "satisfaction with tuition bonus subsidy system". There were significant differences. Through the above analysis, it could be seen that there was significant difference between "school" and the variables "satisfaction with professional course teaching methods", "professional course assessment methods", "satisfaction with accommodation conditions", "satisfaction with campus hygiene" as well as "satisfaction with logistics management".



## CHAPTER 5

### CONCLUSION

As a way to evaluate the quality of education, college students' satisfaction with their school has attracted much attention from all walks of life, which has been regarded as the focus of research on higher education in the education field. The overall satisfaction of college students with their school and their awareness of its importance have been analyzed and explained in the fourth chapter. This time, the survey was conducted on students from two schools, for each of which 220 questionnaires were distributed, with a total of 440 questionnaires distributed. After data preprocessing, some invalid questionnaires were eliminated, and finally 411 valid ones were obtained, of which 210 were issued by UJN and 201 by UTK, with an effective rate of 93.4%. Data obtained through analysis was representative. In this chapter, the five elements of demographics are combined with the seven elements of satisfaction with schools and the importance to analyze the internal situations that affect college students' satisfaction.

#### 5.1 Conclusion

The internal consistency coefficient (Cronbach's Alpha coefficient) table is used in this study to test the reliability of the data, and usually the value of Cronbach's alpha coefficient is between 0 and 1. If the coefficient does not exceed 0.6, it is generally considered that the internal consistency reliability is insufficient; when it reaches 0.7-0.8, it means that the scale has a considerable reliability, and when it reaches 0.8-0.9, it means that the reliability of the scale is very good. First of all, the KMO and Bartlett metrics are used to test the raw data to judge whether the sample data is eligible for validity analysis. The KMO value is an index indicating the result of comparison between the correlation coefficient value and the partial correlation coefficient value. If it is between 0.5 and 1, it means that the samples meet the validity analysis conditions. If its value is less than 0.5, it is considered unsuitable for validity analysis. The respondents are investigated in this paper from three dimensions, namely: satisfaction with curriculum teaching, satisfaction with humanistic environment, and satisfaction with campus management. Among them, satisfaction with curriculum teaching includes the indicators teaching methods, teaching quality and curriculum assessment methods; the degree of satisfaction with humanistic environment includes the indicators campus environment, restaurant environment and accommodation conditions; satisfaction with campus management includes the indicators logistics management, campus hygiene, tuition fees and scholarship funding system.

## 5.2 Discussion

In order to further understand the evaluation of college students' satisfaction with their campus, we conducted a factor analysis to find out whether there were common factors affecting the satisfaction evaluation of the respondents. The results showed that all the 9 variables were highly correlated, on which the Bartlett sphericity test was performed ( $df=36$   $p=0.00<0.001$ ), and the Cronbach  $\alpha$  value was 0.695, indicating that this group of data could be used for factor analysis. The principal component factor method was used to extract common factors. As can be seen from the table below, three common factors are finally obtained from this dataset, whose cumulative contribution rate was 61.432%, which could quite well explain the information of original variables. According to the rotated component matrix, "logistics management", "campus health", "tuition fee, scholarship and funding system" are loaded on the first main factor that can be called "satisfaction with campus management"; while the indicators "teaching methods", "course assessment methods" and "teaching quality" are the second main factor, that is, an indicator of the factors "satisfaction with course teaching" and "satisfaction with the human environment".

The chi-square value of the cross-analysis of "age", "satisfaction with the teaching methods of professional courses" and "satisfaction with logistics management" was 85.798 and 84.048, respectively, and the corresponding p value was 0.071 and 0.091, which were less than 10%, and the confidence level for passing the significance test was 10 %; the chi-square value of the cross-analysis of "age", "satisfaction with restaurant environment" and "satisfaction with campus hygiene" was 91.601 and 91.155 respectively, and the corresponding p value was 0.030 and 0.032, which were less than 5% and passed the significance test at a confidence level of 5%. However, the p-value of the cross-analysis of "age" and all other variables was greater than 0.1, which did not pass the significance test, indicating that there was no significant difference between "age" and these variables. There were significant differences between "age" and "satisfaction with teaching methods of professional courses", "satisfaction with restaurant environment", "satisfaction with logistics management" as well as "satisfaction with campus hygiene". The chi-square value of the cross-analysis of "gender" and "satisfaction with campus hygiene" as well as "satisfaction with the tuition bonus subsidy system" was 13.064 and 17.509 respectively, and the corresponding p-value was 0.011 and 0.002 respectively, with a confidence level of 5% for the significance test; the chi-square value of the cross-analysis of "gender" and "satisfaction with logistics management" was 8.999, whose corresponding p value was 0.061, which passed the significance test with a confidence level of 10%; and "gender" was related to "satisfaction with professional course teaching methods", "satisfaction with professional course assessment method", "satisfaction with professional teaching quality", "satisfaction with campus environment", "satisfaction with restaurant environment" as well as "satisfaction with accommodation conditions".

The p-value of all the chi-square tests for these variables was greater than 0.1, which did not pass the significance test, thus indicating that there was no significant difference between gender and these variables. There were significant differences between "gender" and "satisfaction with campus hygiene", "satisfaction with tuition bonus subsidy system" as well as "satisfaction with logistics management".

### **5.3 Recommendations**

Three research hypotheses are put forward in this study. With the support of the overall data of college students' satisfaction with their school, the final level of college students' satisfaction with their school is average, so it does not reach the first hypothesis as expected. In the data analysis on the influence of factors such as gender, grade, source of students, majors, teachers and other factors on college students' satisfaction with their school, the second hypothesis is successfully verified. Using independent sample test and one-way ANOVA to analyze the seven elements of college students' satisfaction with their school, it is verified that each element has a certain influence on college students' overall satisfaction with their school, and the third hypothesis is verified. College students, as consumers and customers of higher education, must focus their next research on the worthiest of attention. In this study, the satisfaction experience and cognitive level of college students need to be further discussed and studied. The characteristics of these students reflect the current situations of college students. Therefore, these issues must be addressed in the future development of education. Pay attention, find and correct problems in a timely manner, through which students' satisfaction experience will be improved, education service will be better, education quality will show a qualitative leap, and universities will be able to effectively train more useful talents in line with this society and this era.

### **5.4 Limitations**

It should be pointed out that although the author tried his best to make the research perfect and limited the problems to the smallest scope, due to the limitations of theoretical level and some objective as well as practical conditions, this research still has some shortcomings and defects, mainly in the following aspects: first of all, there are still some deficiencies in the preparation of the questionnaire. Although the questionnaire is compiled in strict accordance with the questionnaire preparation procedures while listening to the opinions of the tutors and students, and the reliability and validity have also been basically tested, there are still some shortcomings, especially there may be problems in the selection of some items, which leads to difficulties in naming factor variables; secondly, the scope of the investigation is relatively small, only two universities are selected as research cases.

Although the selection of cases is representative, there is no detailed analysis of the situations of other schools, and it is difficult to cover the research results of other schools, so it remains to be considered whether the research results can be generalized, which are not comprehensive and specific enough. Whether some suggestions are feasible or not needs to be tested in practice. This is mainly due to the limitations of their own theoretical level, and the problems may not be comprehensive enough. Because the research on satisfaction is a subjective evaluation, it is affected by personal likes and dislikes, and students in the same course may also give completely opposite evaluations. Sometimes students are not satisfied, not all because the school or teachers are not doing well enough, but is related to students themselves.

### **5.5 Future Research**

In view of the above shortcomings of the research, the author believes that future research needs to be improved in the following aspects: first of all, continue improving and revising the questionnaire, and carefully consider the selection of items and variables; secondly, the scope of the study can be expanded, which is to make a few more cases, so that the research results have a broad adaptability and can be extended to other colleges as well as universities. The implementation effect has been greatly improved, and student satisfaction has also been greatly improved.



## BIBLIOGRAPHY

- Cheng, J. H., & Marsh, H. W. (2010). National Student Survey: are differences between universities and courses reliable and meaningful?. *Oxford review of education*, 36(6), 693-712. Retrieved from <https://www.tandfonline.com/doi/abs/10.1080/03054985.2010.491179>
- Freeman, R. E., & McVea, J. (2001). A stakeholder approach to strategic management. Retrieved from [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=263511](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=263511)
- Gao Shan. Research on the Strategies of Improving the Satisfaction of College Letters and Visits Based on RATER Index. 2014.
- Hallenbeck, T. R. (1978). College student satisfaction: An indication of institutional vitality. *NASPA Journal*, 16(2), 19-25. Retrieved from <https://www.tandfonline.com/doi/abs/10.1080/00220973.1978.11071708?journalCode=uarp19>
- Han YuZhi. A Review of the American National Student Satisfaction Study [J]. *Comparative Education Review*, 2006 (6), 193.
- Han YuZhi. Key Problems in University and College Student Satisfaction Study: Based on the Reflections on the American National Student Satisfaction Study [J]. *Research in Educational Development*, 2008 (1) 38.
- Limerick university. Student Survey Results 2000. Retrieved from <http://www.ul.ie>
- Limerick university. Student Survey Results 2004. Retrieved from <http://www.ul.ie>.
- Limerick university. Student Satisfaction Survey 2004. Retrieved from <http://www.quality@ul.ie>
- Lin Chongde. Dictionary of Psychology (Volume One): Shanghai Education Press, 2003.
- Liu WU, Yang Xue. Explorative Research on Customer Satisfaction Index Model of Chinese Higher Education[J]. *Journal of Public Management*, 2007.
- Lu XiongWen. Advanced Dictionary Of Management: Shanghai Lexicographical Publishing House, 2013.
- Maslow, A. H. (1970). New introduction: Religions, values, and peak-experiences. *Journal of Transpersonal Psychology*, 2(2), 83-90. Retrieved from <https://www.atpweb.org/jtparchive/trps-02-70-02-083.pdf>
- MBA daily management - The Marketing Theory of 4Cs. China Education Online. 2011-07-18 [Reference date 2013-04-28].
- Richardson, J. T., Slater, J. B., & Wilson, J. (2007). The National Student Survey: development, findings and implications. *Studies in Higher Education*, 32(5), 557-580. Retrieved from <https://www.tandfonline.com/doi/abs/10.1080/03075070701573757>
- School Profile. University of Jinan [Date of Reference 2020-03-21].

- Shi XiaoMing. A Primary Study on the Expected-quality Measurement of University Education [J]. Jour.of N.W. SCI-TECH Uni.of Agri.and Fore, 2003 (3), 90.
- Tao Meizhong. Research on Higher Education Consumption[M] Wuhan Huazhong Normal University Press, (2008) .12.
- Vice President Sakit of Royal Institute of Technology in Thailand visited our school. University of Science and Technology Beijing [reference date 2014-10-23].
- Xu Weiliang, Huang Zhonglin. Improvement of College teaching affairs Depending on Students' Satisfaction[J]. Shanghai College of Electricity & Machinery Technology, 2004(5).
- Zhu GuoFeng. Construction of customer satisfaction index system in higher education [J]. Journal of Dalian Maritime University(Social Science Edition),2003 (4).



# UNIVERSITY STUDENT SATISFACTION QUESTIONNAIRE

## Instruction

Hello, because the author wants to compare and analyze the satisfaction of college students, this questionnaire is made for data collection. The following is a satisfaction survey of college students. Please make a choice based on the actual situation. Thank you for your participation.

### Part I. Personal Characteristics and Basic Information of Students

1. Your gender: [multiple-choice] \*

Male

female

2. Your age [fill in the blank] \*

\_\_\_\_\_

3. Your major [fill in the blank] \*

\_\_\_\_\_

4. Your current grade [multiple-choice] \*

First grade

Second grade

Third grade

Fourth grade

Master degree

5. Your hometown city [fill in the blank] \*

\_\_\_\_\_

6. What is your major? [Fill in the blank] \*

\_\_\_\_\_

## Part II. Basic Situation of the School

7. Your degree of satisfaction with this major is [multiple-choice] \*

Very dissatisfied    1    2    3    4    5    Very satisfied

8. Are you satisfied with the tuition [multiple-choice] \*

Very dissatisfied    1    2    3    4    5    Very satisfied

9. Are you satisfied with the school's acceptance rate [multiple-choice] \*

Very dissatisfied    1    2    3    4    5    Very satisfied

10. Are you satisfied with the school's graduation rate [multiple-choice] \*

Very dissatisfied    1    2    3    4    5    Very satisfied

## Part III. Teaching Conditions

11. Are you satisfied with the school's facilities [multiple-choice] \*

Very dissatisfied    1    2    3    4    5    Very satisfied

12. Are you satisfied with the quality of school teachers [multiple-choice] \*

Very dissatisfied    1    2    3    4    5    Very satisfied

13. Are you satisfied with the school scale [multiple-choice] \*

Very dissatisfied    1    2    3    4    5    Very satisfied

14. Are you satisfied with the school curriculum [single-choice] \*

Very dissatisfied    1    2    3    4    5    Very satisfied

#### Part IV. School Life

15. Are you satisfied with the scale of the school canteen [single-choice] \*

Very dissatisfied    1    2    3    4    5    Very satisfied

16. Are you satisfied with the quality of the school dormitory [multiple-choice] \*

Very dissatisfied    1    2    3    4    5    Very satisfied

17. Are you satisfied with the school's campus hygiene [single-choice] \*

Very dissatisfied    1    2    3    4    5    Very satisfied

18. Are you satisfied with the school environment [single-choice] \*

Very dissatisfied    1    2    3    4    5    Very satisfied

Question No.	Teaching conditions	Very dissatisfied- Very satisfied				
		1	2	3	4	5
(1)	Are you satisfied with the school's facilities [multiple-choice] *					
(2)	Are you satisfied with the quality of school teachers [multiple-choice] *					
(3)	Are you satisfied with the school scale [multiple-choice] *					
(4)	Are you satisfied with the school curriculum [single-choice] *					

Question No.	Basic situation of the school	Very dissatisfied- Very satisfied				
		1	2	3	4	5
(1)	Your degree of satisfaction with this major is [multiple-choice] *.					
(2)	Are you satisfied with the tuition [multiple-choice] *					
(3)	Are you satisfied with the school's acceptance rate [multiple-choice] *					
(4)	Are you satisfied with the school's graduation rate [multiple-choice] *					

Question No.	School life	Very dissatisfied- Very satisfied				
		1	2	3	4	5
(1)	Are you satisfied with the scale of the school canteen [single-choice] *					
(2)	Are you satisfied with the quality of the school dormitory [multiple-choice] *					
(3)	Are you satisfied with the school's campus hygiene [single-choice] *					
(4)	Are you satisfied with the school environment [single-choice] *					

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