

AN EXPLORATION OF FACTORS INFLUENCING UNIVERSITY STUDENTS'
SATISFACTION WITH WECHAT SERVICES IN XI'AN CITY , SHAANXI
PROVINCE, CHINA



MASTER OF BUSINESS ADMINISTRATION IN DIGITAL ECONOMICS AND
MANAGEMENT INNOVATION
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XINTIAN DU

A INDEPENDENT STUDY SUBMITTED IN PARTIAL FULFILLMENT
OF THE REQUIREMENTS FOR THE DEGREE OF MASTER OF BUSINESS
ADMINISTRATION
IN DIGITAL ECONOMICS AND MANAGEMENT INNOVATION (INTERNATIONAL
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ACADEMIC ADMINISTRATION AND DEVELOPMENT MAEJO UNIVERSITY
2023

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ชื่อเรื่อง	การสำรวจปัจจัยที่มีอิทธิพลต่อความพึงพอใจของนักศึกษาในมหาวิทยาลัยต่อบริการวีแชท เมืองซีอาน มณฑลส่านซี ประเทศจีน
ชื่อผู้เขียน	Miss Xintian Du
ชื่อปริญญา	บริหารธุรกิจมหาบัณฑิต สาขาวิชาเศรษฐศาสตร์ดิจิทัลและนวัตกรรมการจัดการ (หลักสูตรนานาชาติ)
อาจารย์ที่ปรึกษาหลัก	ผู้ช่วยศาสตราจารย์ ดร.ศุทธิกานต์ คงคล้าย

บทคัดย่อ

งานวิจัยในครั้งนี้มีวัตถุประสงค์เพื่อศึกษาอิทธิพลของคุณภาพระบบ คุณภาพของข้อมูล และคุณภาพบริการต่อความพึงพอใจของนักศึกษาในมหาวิทยาลัยต่อบริการวีแชท เมืองซีอาน มณฑลส่านซี ประเทศจีน ผู้วิจัยใช้ระเบียบการศึกษาระดับปริมาณ โดยการสำรวจแบบออนไลน์ในการเก็บข้อมูลจากนักศึกษาที่เคยใช้บริการวีแชท จำนวน 400 คน เครื่องมือที่ใช้ในการเก็บข้อมูลคือแบบสอบถามออนไลน์ สถิติที่ใช้ในการวิเคราะห์ข้อมูล ได้แก่ ค่าความถี่ ค่าเฉลี่ย ค่าเบี่ยงเบนมาตรฐาน การวิเคราะห์การถดถอยพหุคูณ ที่ระดับนัยสำคัญเท่ากับ 0.05 กลุ่มตัวอย่างส่วนใหญ่เป็นเพศชาย (คิดเป็น 54.5%) และเพศหญิง (คิดเป็น 45.5%) อายุระหว่าง 18-22 ปี (คิดเป็น 47%) ส่วนใหญ่เป็นนักศึกษาระดับปริญญาตรี (คิดเป็น 69.75%) ผลการศึกษาพบว่า การพัฒนาคุณภาพระบบ, คุณภาพข้อมูล, และคุณภาพบริการของบริการบัญชีทางการของวีแชทมีผลต่อความพึงพอใจของผู้ใช้ที่เพิ่มขึ้น ผู้วิจัยคาดว่าผลการศึกษาในครั้งนี้จะมีประโยชน์ต่อบุคคลและหน่วยงานที่มีส่วนเกี่ยวข้องในการให้บริการบัญชีทางการของวีแชท โดยเฉพาะในด้านการปรับปรุงความพึงพอใจของผู้ใช้บริการบัญชีทางการของวีแชท

คำสำคัญ : ความพึงพอใจ, วีแชท, คุณภาพระบบ, คุณภาพของข้อมูล, คุณภาพบริการ

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ABSTRACT

This study investigates the impact of system quality, information quality, and service quality on user satisfaction with WeChat Official account applications among university students in Xi'an City, Shaanxi Province, China. Employing a quantitative research approach, online surveys were administered to 400 undergraduate and junior college students accessing their university's WeChat account. Data collection utilized online questionnaires, and statistical analyses included frequency, percentage, mean, standard deviation, and multiple regressions for comprehensive data analysis. This research determined the statistical significance level at 0.05. The respondents were university students, with 54.5% male and 45.5% female respondents. The age distribution highlights 47% falling within the 18-22 age range, emphasizing the study's relevance to the university student population. Education-wise, 69.75% held a Bachelor's degree. The findings indicate that enhancements in the system quality, information quality, and service quality of the WeChat Official account are associated with increased user satisfaction. The researcher anticipates that this study will provide substantial benefits to individuals and entities engaged in delivering WeChat Official account services.

Keywords : Satisfaction, WeChat, System Quality, Information Quality, Service Quality



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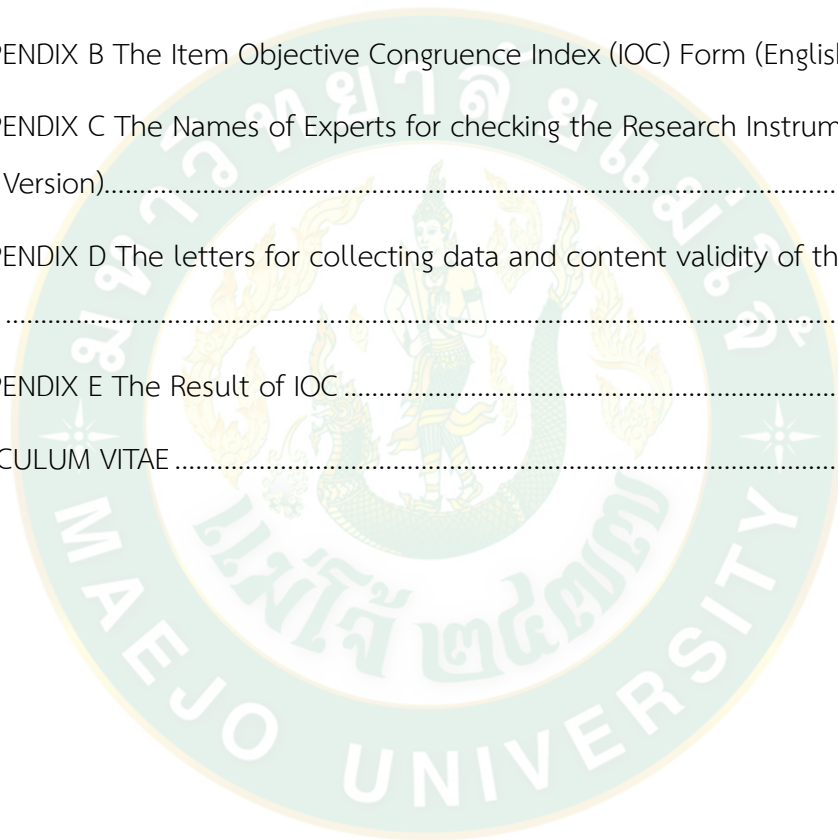
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CHAPTER I

INTRODUCTION

Research Background

The Digital Economy is a novel economic paradigm driven by digital technology in the online realm. It leverages technology to enhance efficiency and generate added value for economic activities across various sectors, including manufacturing, transportation, sales, and services. As many are aware, the global spread of the COVID-19 virus has decelerated traditional activities due to travel restrictions and physical distancing. However, in the digital realm, everything operates at an accelerated pace. Whether we are conscious of it or not, digital technology has already become an integral part of our lives, encompassing activities such as social media engagement, online shopping, gaming, streaming movies, food delivery, travel bookings, and even education.

Online application a pivotal role in enabling interactions between two or more distinct yet interdependent groups of users via the Internet (Drewel et al., 2021). These platforms encompass a wide range of digital services, including marketplaces, search engines, social media networks, creative content outlets, app stores, communication services, and payment systems (Ong and Toh, 2023). Furthermore, according to the Organization for Economic Co-operation and Development (OECD) (2019) an online platform is defined as a digital service that facilitates interactions between two or more distinct but interdependent sets of users. Organizations often create multiple interconnected applications, collectively referred to as the platform itself. Today's technology application a critical role in facilitating digital transformation, offering functionalities that streamline processes and create business value for customers (Pascucci et al., 2023). Every facet of an organization undergoes significant changes to its operational methods. In the realm of education, institutions are progressively transitioning towards becoming 'Digital Universities' to align their operations with the rapid changes observed in today's educational landscape (Maltese and Giunchiglia, 2017). In this era, technology forms the backbone for delivering services to students, staff, and the broader community across various aspects. Moreover, amidst the challenges posed by the COVID-19 pandemic, universities have been compelled to continually adapt to digital services (Choudhury, 2020). This has entailed the expansion of digital infrastructure to support teaching and learning management, research activities, online community services, and the development of innovative service delivery methods (Alsahlanee and Almjilawi, 2021). The overarching goal is to create experiences and learning ecosystems that resonate with the demands of the modern era. For many organizations, both in the public and private sectors, a primary objective is to deploy easily accessible applications to users. This is especially pertinent in the

field of education, where these applications serve as vital conduits for students to access information and services effortlessly (Alenezi, 2023).

WeChat is a multifunctional social media, messaging, and payment application that boasts over half of China's population as users. It serves as an all-in-one platform for both social and transactional interactions within China and ranks among the top 10 social networks globally. Users leverage WeChat for chatting with friends, conducting voice and video calls, engaging in gaming, splitting bills at lunch, and conducting online transactions. Furthermore, WeChat offers features that facilitate organizations in reaching their target audience (Programmer2Articles, 2020). WeChat Business Accounts, which are official accounts accessible to media outlets, government entities, individuals/celebrities, and businesses, play a pivotal role in this regard. These accounts enable brands to engage a vast audience and effectively bolster brand awareness. There are three primary types of WeChat Business Accounts, namely Subscriptions Accounts, Service Accounts, and Enterprise Accounts (SEO Agency China, 2021).



Figure 1 WeChat Application

Source: SEO Agency China, 2021

WeChat boasts a substantial user base, with 1.3 billion monthly active users and a notable average annual growth rate of 48.7% from 2011 to 2021. Within China, WeChat holds a particularly strong presence, with 811 million users, constituting 57.9% of the country's total population. Projections indicate that the number of active users

will further increase, reaching an estimated 1.102 billion by the year 2025. Additionally, the platform supports approximately 20 million active WeChat Official Accounts, which serve as effective tools for content promotion, follower engagement, and connection to mini-sites hosted within the platform (Adchina.io, 2022). In recent years, the WeChat application has garnered attention from college information departments and student associations due to its convenience, quick accessibility, diverse interactive applications, and robust flexibility. WeChat's utility extends to aligning with the distinct identities of educational institutions and individuals. In many colleges and universities, a significant proportion of WeChat content is original, reflecting a departure from traditional metrics such as conversion rates, forwarding rates, reading rates, and like rates. The primary role of WeChat Official Accounts in educational institutions is to deliver high-quality, relevant content while serving the needs of teachers and students. In addition to providing essential information and consultation services, college and university Official WeChat Accounts can actively develop third-party WeChat applications that enhance convenience for the academic community. Examples include functions like linking campus cards, grade inquiries, course selection, virtual confession walls, second-hand transactions, and more. The proliferation of campus-centric applications represents a prominent trajectory for Official WeChat Accounts in educational settings. As WeChat continues to open up new possibilities, an increasing number of campus applications will find integration through the platform. Effectively managing the WeChat public platform in colleges and universities necessitates close collaboration among various school units and departments, ensuring seamless integration of content within WeChat Official Accounts. Moreover, employing diverse operational strategies is crucial to make the platform more accessible and appealing to both teachers and students (Shaanxi Channel of People's Daily Online, 2016).

As of 2019, every university under the direct purview of the Ministry of Education and a total of 1,634 universities nationwide have established official WeChat public platforms. Within the WeChat ecosystem, the content publishing process necessitates secondary and tertiary-level reviews of daily content. This approach has implications for member engagement and can hinder operational efficiency. The predominant content disseminated through these platforms primarily revolves around campus activities news, original columns highlighting aspects of campus culture, and in-depth articles offering perspectives and evaluations of campus-related topics. Specifically, more than 85% of daily posts focus on news updates, while approximately 10% feature non-fixed columns. The platform's central objective is to disseminate information and promote scientific knowledge. Results from surveys indicate that over 80% of official WeChat public platforms belonging to colleges and universities have completed brand design, signifying initial brand awareness. However, only 50% have implemented a unified image recognition system, and the majority lack a dedicated department for brand research and image planning. Furthermore, there remains a shortage in terms of the establishment time and team members in such departments

(Qi, Fang, and Jia, 2020). General Secretary Xi Jinping has underscored the importance of higher education institutions keeping pace with the evolving landscape of new media. His emphasis lies in the continual exploration of new avenues and methodologies for delivering ideological education to students in this era (Wei et al., 2017). In the present day, educational and training institutions employ various strategies for student recruitment. Parents and students are increasingly focused on accessing tailored information that aligns with their specific needs, and WeChat, known for its immediacy, plays a pivotal role in this regard. Educational institutions face the challenge of not only attracting parents and students (marketing) but also convincing them to enroll (sales) and assisting with post-enrollment issues (customer service). For instance, the WeChat group application is predominantly used for maintaining relationships and addressing queries from enrolled students. The management of WeChat groups typically involves both teachers and teacher assistants. Teachers are responsible for addressing students' and parents' professional inquiries, while teacher assistants handle questions related to course commencement, discounts, pricing, and other administrative aspects (effectively serving as course consultants) (Traveler, 2021). Many colleges and universities primarily utilize their official WeChat platforms for news dissemination and promotion, often overlooking their potential as service channels for students. They tend to treat all subjects equally when pushing didactic information, resulting in inefficiency. Effective engagement with students on the official WeChat public platform for educational institutions necessitates the presence of original content. Unfortunately, many of these platforms suffer from a lack of originality, plagiarism issues, and homogenization, leading to a decline in content quality and distinctiveness. Colleges and universities frequently employ their WeChat platforms primarily for news distribution, undermining their capacity for interaction. They struggle to address user feedback, leading to limited interaction and online activities on their official microblogs. These challenges hinder effective communication and user engagement (Cao et al., 2019). According to the survey conducted by Qi et al. (2020), operational issues plaguing official WeChat public platforms in universities can be categorized as follows: vague positioning and limited innovation; complex audience group structures that are difficult to adjust; a lack of differentiation from other WeChat public platforms within the institution; excessive review processes hampering efficiency; unclear review standards; high risk of content deletion; frequent team member turnover; difficulty in motivating team members; team members lacking relevant knowledge and experience in new media operations; and unclear division of labor among team members.

Communication channels with students are important to enable them to have access to the information necessary for study. Therefore, creating a variety of communication channels to keep up with the changes of the times as well as in line with the constantly evolving technology (Huang et al., 2005) in Each channel must present appropriate information and be consistent with the platform and functionality

in order to facilitate students or users receiving services from online channels as if using on-campus services (Mohamed Hashim et al., 2022).

Effective communication channels are essential for students to access the information they need for their studies. The WeChat app serves as a valuable platform for both students and educational institutions (Li, 2018). However, there are certain limitations when it comes to using on-campus services or accessing content through the website. Some information available on the website may not be fully accessible through the application. While having multiple communication channels can benefit students, it is crucial to examine the factors that influence student satisfaction with the university's WeChat Official Account service (Zhang, 2019). This examination can serve as a guideline for further enhancing the university's information dissemination. Additionally, although technologies are designed to be compatible with each other, they still have limitations in terms of accessibility (OECD, 2021), which may hinder comprehensive access to university information. As many universities have established communication channels with students through WeChat's official accounts, which have been in use for some time, it is imperative to improve the quality of educational communication channels through applications. This improvement should encompass information quality, accuracy, completeness, timeliness, and reliability, along with system quality.

For these reasons, conducting a study titled 'An exploration of factors influencing university students' satisfaction with WeChat services in Xi'an city Shaanxi province, China'. An empirical investigation of influential factors' will be instrumental in analyzing approaches to developing communication channels, delivering information effectively, and, most importantly, reaching the maximum number of students.

Research Questions

What are the key factors that influence university students' satisfaction with WeChat official account applications in Xi'an City, Shaanxi Province, China?

Research Objectives

1. To analyze the impact of system quality on user satisfaction with WeChat Official account applications among university students in Xi'an City, Shaanxi Province, China.
2. To analyze the impact of information quality on user satisfaction with WeChat Official account applications among university students in Xi'an City, Shaanxi Province, China.

3. To analyze the impact of service quality on user satisfaction with WeChat Official account applications among university students in Xi'an City, Shaanxi Province, China.

Scope of the Study

Scope of Demography

The population for this study comprises 63 general institutions of higher learning, including undergraduate and junior colleges, situated in Xi'an City, Shaanxi Province, China. These institutions collectively enroll 835,600 students who have previously accessed a university's WeChat official account, (Xi'an Bureau of Statistics National Bureau of Statistics, 2023).

Scope of Area

The scope of the area were 63 general institutions of higher learning (undergraduate and junior colleges), with 835,600 students in Xi'an city, Shaanxi province, China.

Scope of Contents

The study content and scope of the research will be carried out under satisfaction concepts, system quality, information quality, service quality, and the other related theories, concepts, and research framework.

The variables related to the study “An Exploration of Factors Influencing University Students’ Satisfaction with WeChat Services in Xi’an, China” are as follows:

1. Independent Variables: System quality, Information quality and Service quality.
2. Dependent Variables: Students' satisfaction.

Scope of Time

The researcher has determined a time frame for conducting the research, which will take place from June to October 2023, spanning a period of 5 months.

Research Significance

Practical Insights for Enhanced User Satisfaction

This research yields practical insights aimed at elevating user satisfaction with WeChat official account applications among university students in Xi'an city, Shaanxi Province, China. These findings serve as actionable guidance for developers and educational institutions, facilitating the enhancement of their offerings to provide more engaging and gratifying user experiences.

Academic Contribution to User Satisfaction Literature

This study makes a notable contribution to the academic discourse surrounding user satisfaction and mobile applications. It offers invaluable insights into the specific determinants of user satisfaction within a culturally nuanced context. By doing so, it contributes to a deeper comprehension of user behavior and preferences in the realm of mobile technology.

Global and Cross-Cultural Relevance

While the study's focus lies within Xi'an city, Shaanxi Province, China, its implications resonate far beyond its immediate scope. The lessons gleaned regarding user satisfaction, quality factors, and mobile app usage possess universal applicability in cross-cultural and global contexts. These findings are poised to inform practices, policies, and strategies not only within China but also across diverse regions and industries worldwide.

Definition of Terms

WeChat Official Account

The WeChat official account serves as an online marketing communication tool for universities, facilitating the expansion of communication channels. It enables students to efficiently access university information, receive updates on promotions via the WeChat official account, and conveniently engage in educational-related transactions.

System Quality

System quality refers to the usability of an information technology system, including quick system response, system stability, and user-friendly interface characteristics. System quality encompasses the usability aspects of an information technology system, encompassing attributes such as prompt system response, system stability, and user-friendly interface characteristics.

Information Quality

Information quality pertains to the refinement of information to a degree where it becomes valuable to users, ensuring that the information technology system delivers content that aligns with user requirements.

Service Quality

Service quality pertains to both tangible and intangible attributes of a service that are recognized and met by the service recipient. These attributes include the

service's ability to consistently deliver a standard level of service and the overall quality of the service experience.

Satisfaction

Satisfaction serves as a key metric for assessing the success of an information technology system, with a significant reliance on user contentment, a factor influenced by individual circumstances and user attitudes.



CHAPTER II

REVIEW OF RELATED LITERATURE

In this chapter, an extensive literature review is conducted concerning the utilization of WeChat Official Account applications within the context of educational institutions. The chapter explores the significance of communication channels in providing students with access to essential study-related information. A critical examination of previous research underscores the importance of diverse communication channels and their alignment with the specific requirements of each platform. Additionally, the chapter addresses the challenges arising from disparities in technological accessibility.

Furthermore, this chapter delves into the core subject of educational communication channels' development, with a particular focus on the defining qualities of these channels. These qualities encompass information quality, accuracy, completeness, currency, and reliability, as well as system quality, which is often overlooked. The academic study titled "An exploration of factors influencing university students' satisfaction with WeChat services in Xi'an city, China" serves as the primary subject of scrutiny in this chapter. The aim is to illuminate the multifaceted nature of student satisfaction with their university's WeChat official account application within the dynamic educational landscape of Xi'an city, China. The subsequent sections provide further details:

1. Using WeChat Official Accounts in Xi'an City, Shaanxi Province, China's Educational Institutions
2. WeChat
 - 2.1 Definition of WeChat
 - 2.2 Operation of WeChat Application
 - 2.3 Service of WeChat Application
3. Concepts and theories related to system quality
 - 3.1 System Quality Concepts
 - 3.2 System Quality Theories
4. Concepts, theories, and research related to information quality
 - 4.1 Information Quality Concepts
 - 4.2 Characteristics of Data Quality
 - 4.3 Research on Information Quality
5. Concepts, theories, and research related to service quality
6. Concepts, theories, and research related to service satisfaction
 - 6.1 Service Satisfaction Concepts
 - 6.2 Service Satisfaction Theories
 - 6.3 Research Related to Service Satisfaction
7. Related Research
8. Research Framework

9. Research Hypotheses

Using WeChat Official Accounts in Xi'an City, Shaanxi Province, China's Educational Institutions

In 2022, under the strong leadership of the Shaanxi Provincial Party Committee and the Provincial Government, the province's education system will adhere to the guidance of Xi Jinping Thought on Socialism with Chinese Characteristics for a New Era, implement the fundamental task of cultivating morality and cultivating people, and aim to accelerate the construction of a strong education province. Comprehensive reforms in the field of education have been deepened, and new progress has been made in the development of various educational undertakings at all levels (Shaanxi Provincial Department of Education, 2023).

Recently, for Xi'an City, Shaanxi Province, a major city of culture, science, and education, it may be a new starting point for the number of college students to exceed one million for the first time. The data shows that there are 7 cities with more than one million college students, in order: Guangzhou, Zhengzhou, Wuhan, Chongqing, Chengdu, Beijing, and Xi'an City, Shaanxi Province, among which Xi'an City, Shaanxi Province is the newly promoted city with "million college students". Provincial capitals are often able to attract talents from a province. Xi'an City, Shaanxi Province is a well-known large education city, and also a large education city in Northwest China, which has always been attractive to its surrounding areas. According to the "2022 Xi'an City, Shaanxi Province National Economic and Social Development Statistical Bulletin", in terms of science and technology, education, culture, health and sports, at the end of the year, there were 63 general institutions of higher learning (undergraduate and junior colleges), with 835,600 students and 217,300 graduates million people. There are 43 postgraduate training units, with 177,600 students and 39,500 graduates. There are 517 ordinary middle schools, with 521,600 students and 150,100 graduates. There are 1,174 primary schools with 936,300 students and 122,800 graduates (Fan, 2023).

WeChat

Definition of WeChat

According to information on Tencent's official website, WeChat is a mobile instant messaging software launched by Tencent in China in January 2011. In 2012, its number of users reached 100 million. And in 2012, WeChat began to get involved in overseas markets. As of now, WeChat currently has 4 operating systems: Android, iOS, Windows, and macOS, and the platform is available in 17 languages (Filgueira, 2022). Users can send text, voice, video, stickers, photos, files, links, locations, coupons,

music, red envelopes, transfers, etc. to friends through the WeChat client, and can also make real-time or video calls. WeChat is a comprehensive mobile communication application that helps you easily connect with friends around the world. WeChat allows you to chat in groups, conduct video chats, play games with friends, and share your life to your circle of friends, allowing you to experience a refreshing mobile lifestyle (Weixin, n.d.).

WeChat not only connects people and people, people and services, and businesses, but also connects people and things, people and data, and people and intelligence. At the same time, it is also the link between people's emotional relationships. According to public information on the Chinese market, as of June 30, 2022, WeChat had more than 1.299 billion active users worldwide, making it the social software with the most active users in mainland China (199It, 2022).

Operation of WeChat Application

If customers want to use WeChat, they need to download 4 clients for Android, iOS, Windows, and macOS. After downloading, customers who want to use WeChat need to register as a user. As long as the account is secure, customers can log out if they do not want to use WeChat.



Figure 2 WeChat Application Software Download Page (WeChat, n.d.)

Source: <https://weixin.qq.com/>

The specific operations are as follows:

1) Open the WeChat program client port and click the registration button. Fill in personal information, avatar, nickname, country/region, mobile phone number, and set password on the registration page. Check "I have read and accept the terms of service. The information collected on this page is only used account registration." Finally, click "Agree and Continue".

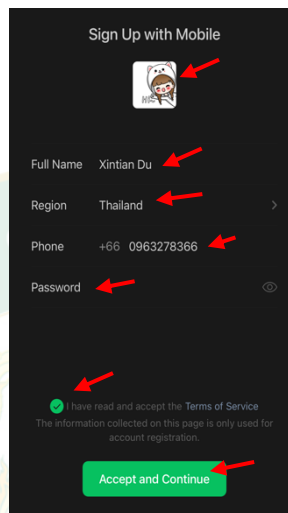


Figure 3 WeChat Registration Information Page 1

Source: Adapted from WeChat Application, 2023

2) Check "I have read and accept the above terms" and click Next.

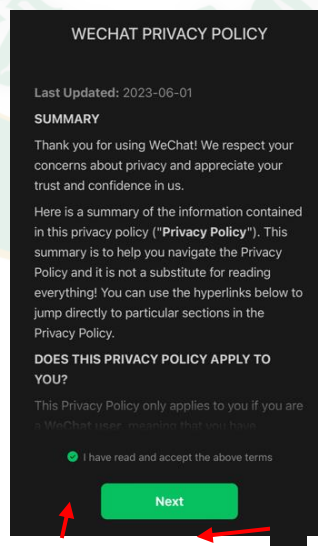


Figure 4 WeChat Registration Information Page 2

Source: Adapted from WeChat Application, 2023

3) For security verification, click Start.

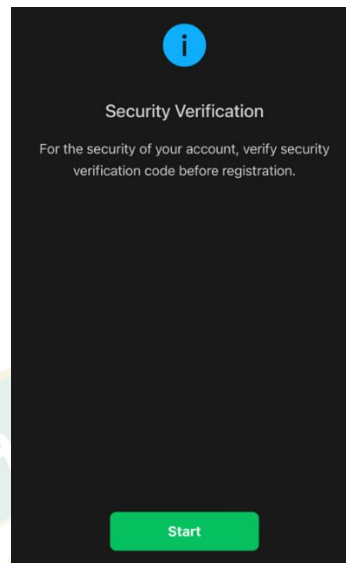


Figure 5 WeChat Registration Information Page 3

Source: Adapted from WeChat Application, 2023

4) Ask friends who are already using WeChat to perform security-assisted verification, send the screenshot containing the QR code to the friend, and ask the friend to use his WeChat scan function to scan the QR code to complete the authentication.

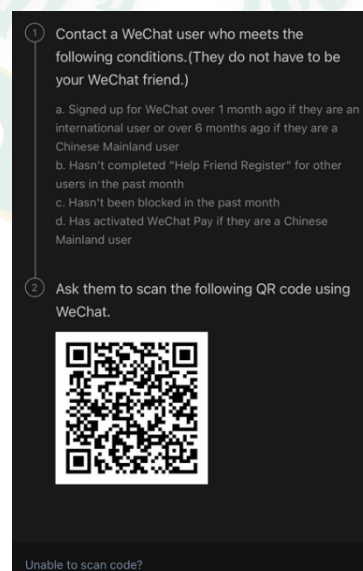


Figure 6 WeChat Registration Information Page 4

Source: Adapted from WeChat Application, 2023

5) Receive a page reminder indicating successful verification.

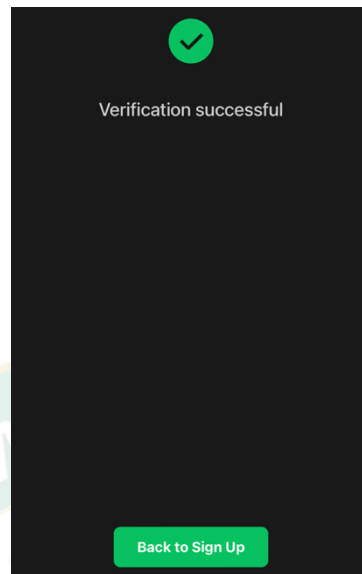


Figure 7 WeChat Registration Information Page 5

Source: Adapted from WeChat Application, 2023

6) The system will automatically send a mobile phone verification code. After the user receives the mobile phone verification code, enter the verification code location, and then click Submit.

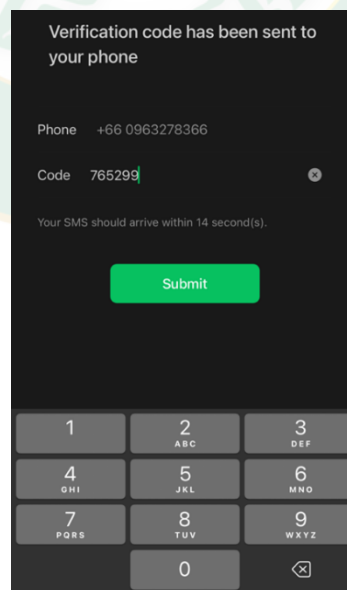


Figure 8 WeChat Registration Information Page 6

Source: Adapted from WeChat Application, 2023

7) Read the WeChat Terms of Service and Privacy and click Next.

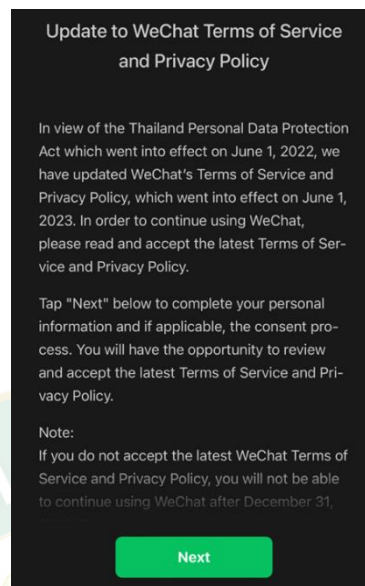


Figure 9 WeChat Registration Information Page 7

Source: Adapted from WeChat Application, 2023

8) Read the page information, check "I have read and understand the above content", and click Next.

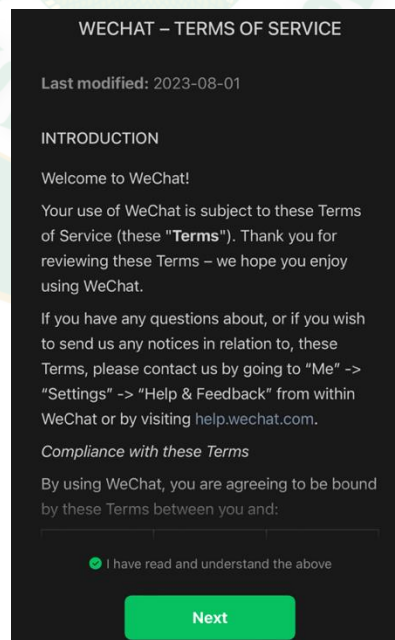


Figure 10 WeChat Registration Information Page 8

Source: Adapted from WeChat Application, 2023

9) Enable WeChat service, click Allow, and then click Next.

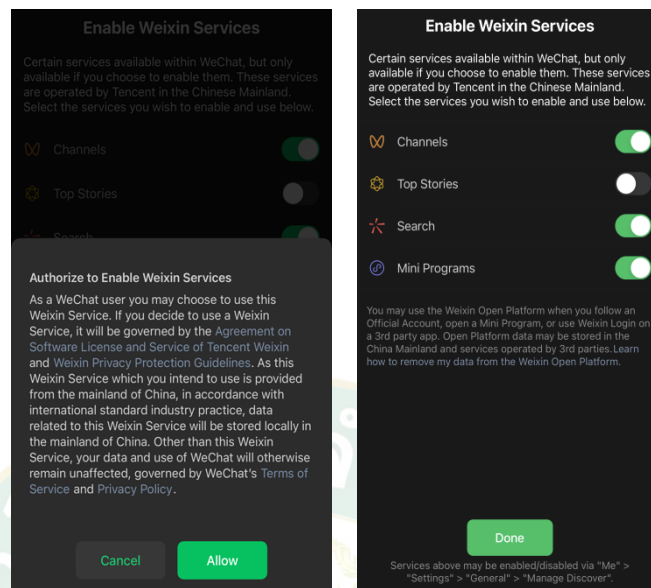


Figure 11 WeChat Registration Information Page 9

Source: Adapted from WeChat Application, 2023

10) Complete the WeChat account registration. After successful registration, you will automatically log in to the WeChat page. The main page contains 4 main functions: Chats, Contacts, Discover, and Me.

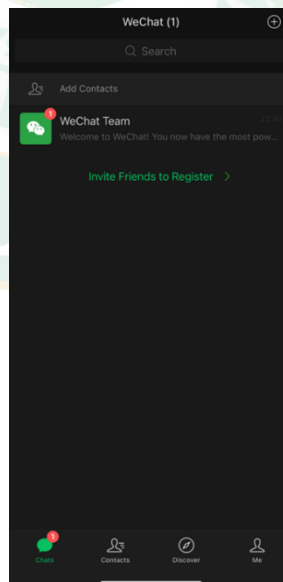


Figure 12 WeChat Registration Information Page 10

Source: Adapted from WeChat Application, 2023

11) The Chats area mainly displays the friend chat box, including the number of messages, the search area, the "+" in the upper right corner to initiate group chat, add friends, scan, and the payment function area.

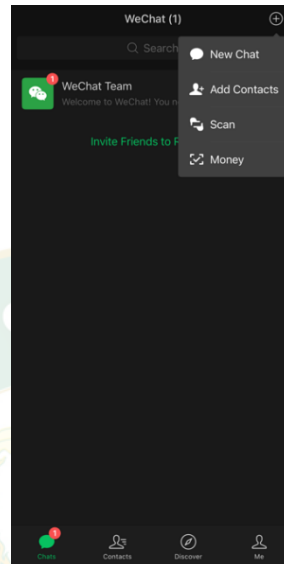


Figure 13 WeChat Chats Area Function

Source: Adapted from WeChat Application, 2023

12) The Contacts area mainly includes: new friends, group chats, tags, file transfers, WeChat teams, and friend lists. The "+" in the upper right corner still functions to add friends.

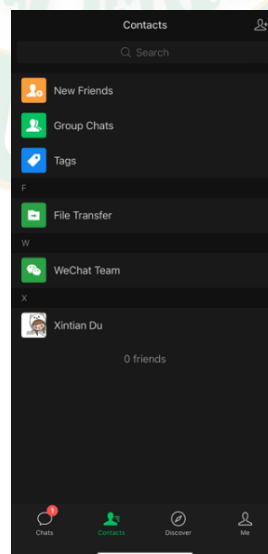


Figure 14 WeChat Contacts Area Function

Source: Adapted from WeChat Application, 2023

13) The Discover area mainly includes: friends circle, video account, scan, shake, search, nearby people, WeChat out and other functions. It is worth noting that if it is the Chinese version of WeChat, it will also have functions such as live broadcast, watching, shopping, games, and mini programs.

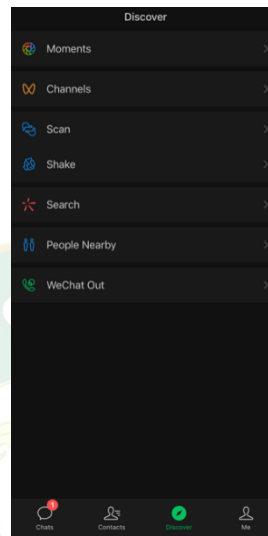


Figure 15 WeChat Discover Area Function

Source: Adapted from WeChat Application, 2023

14) The Me area mainly includes: collections, friend circles, emoticons, and settings. If it is the Chinese version of WeChat, there will be two more functions: services and card packages.

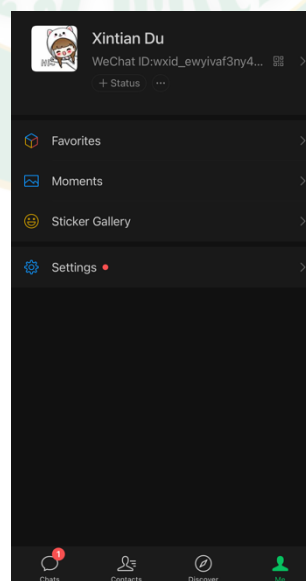


Figure 16 WeChat Me Area Function

Source: Adapted from WeChat Application, 2023

Service of WeChat Application

WeChat, launched in 2011, is an instant messaging app by Tencent. As of June 2022, it had over 12.99 billion active users, with China's population around 1.4 billion. The main application services are as follows (Wang, 2020):

1) Social Networking- Sending Messages: WeChat is an instant messaging app that enables users to send messages, emoji and pictures to contacts, as well as audio and video calls. Users can form groups with up to 500 people and hold group calls with up to nine people. For those looking for new friends, tapping "People Nearby" or shaking their phone can help them connect with others.

2) Moments: Moments is a social networking platform similar to Instagram or Facebook, allowing users to share photos, videos, music, and web links with their WeChat contacts. It's popular for making announcements and showcasing daily life, with contacts liking and commenting on the content.

3) Official Accounts: Government organizations, companies, and groups can register WeChat Official Accounts to send articles and messages to followers. China Academy of Information and Communications Technology reports over 10 million WeChat Official Accounts.

4) Ordering in a Restaurant: In China, users can order and pay for food and drinks using their WeChat app by scanning QR codes on tables. The app also facilitates daily payments in home services, entertainment, and travel sectors, with consumption reaching \$47.9 billion in 2017.

5) Shopping: In 2014, WeChat and JD partnered, allowing users to shop on JD without leaving WeChat. JD founder Richard Liu Qiangdong stated that 25% of new customers come from WeChat.

6) Payment: Send money - users can send money transfers to their contacts directly.

7) Red Envelopes: Chinese people traditionally gave red envelopes during special occasions like Chinese New Year and weddings. With WeChat, users can now send virtual "lucky money" to friends and companies, with 823 million users sending it in just five days, according to the 2019 WeChat Spring Festival Data Report.

8) Pay for Your Bills: WeChat users can pay their electricity and water bills via the app.

9) More: WeChat launched mini programs in 2017, allowing users to book appointments, take taxis, and apply for loans without downloading multiple apps. Aldzs.com reports 3.2 million mini programs and 410 million daily active users, making it an eco-system for various tasks.

Concepts and Theories Related to System Quality

System Quality Concepts

Hall (1962) mention a system, in a broad sense, refers to a collection of interconnected and interdependent elements or components that work together to achieve a common purpose or goal.

Zeiler and Savanović (2010) mention one approach to achieve a supportive, orderly framework is the structuring of a hierarchy of levels of complexity for basic elements in the various fields of inquiry. This framework of levels, according to General System Theory, was transformed into the decisions model as presented by Hall (1962 cited in Zeiler and Savanović, 2010). The design process, from a systems theory perspective, is a chain of activities starting with an abstract problem and ending with a concrete solution. Methodical Design links abstraction levels with stages and steps, dividing the process into easier tasks and providing decision points for review and evaluation, see figure 17.

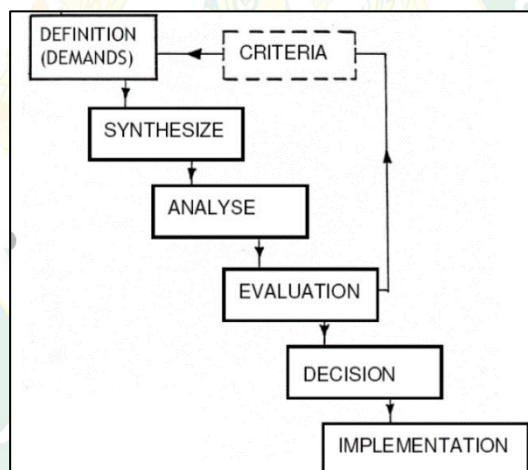


Figure 17 General System Theory Decision Model According to Hall (1962)

Source: Zeiler and Savanović, 2010

Bertalanffy (1968) mention systems theory, originating in the 20th century across multiple disciplines, underscores the interrelationships and interconnectedness of components within an entire entity, suggesting that understanding the whole requires more than simply understanding its individual parts. This approach is vital in comprehending complex systems where components work in tandem, influencing

one another, and it has found applicability in fields ranging from biology to engineering and social sciences.

A system is a collection of interconnected elements organized for a specific purpose or common objectives. Information systems use a combination of components, including computer hardware, software, manual processes, management practices, decision models, and databases (Ramachandra and Srinivas, 2012). A system is hierarchical, consisting of sub-systems that exchange data, facilitating the flow of information and functions throughout the broader system. This concept emphasizes the interdependence and coordinated functioning of elements within a system.

O'Brien and Marakas (2010) mention a system is a set of interrelated components working together to achieve common objectives through an organized transformation process. Examples of systems include the physical and biological sciences, modern technology, and human society. Examples include the solar system, the human body, oil refinery, and business organization's socioeconomic system.

In summary, a system is a holistic and organized collection of components that operate together within a defined boundary to achieve specific goals, and it is a foundational concept with broad applications in various disciplines.

System Quality Theories

Faizan et al. (2014) mentions the system quality is defined by attributes such as functionality, dependability, data quality, flexibility, and integration, including software and data components such as functionality, navigation, and accessibility are the main characteristics of system quality. It represents the quality of the information system's processing itself.

Al-Mamary et al. (2014) mention ease of use refers to the perceived ease of using an information system, which is the degree to which users perceive it requires less effort. A quality information system must be flexible enough to accommodate users' needs and changes. Lower flexibility leads to lower user satisfaction, which in turn affects engagement. Reliability is a crucial indicator of quality information systems, as users can trust the system. Ease of learning is also important, as users perceive the system as easy to learn. System features like intuitiveness, sophistication, and response times are also crucial indicators of quality information systems. Longer response times may lead to lower user satisfaction.

Benmoussa et al. (2018) mention system quality describes the "good" quality of the information system in relation to its operational characteristics. It serves as an evaluation of the inherent quality of information processing, encompassing critical components such as software and data elements. In this research, they chose to evaluate system quality using three indicators: 1) usability 2) flexibility, and 3) accessibility.

Bahari and Mahmud (2018) mention system quality measures data processing efficiency and is equivalent to technical communication level. It measures reliability in terms of convenience, ease, functionality, and system metrics.

Petter et al. (2008) mention system quality refers to desirable characteristics of an information system. For example: ease of use, system flexibility, system reliability, and ease of learning, as well as system features of intuitiveness, sophistication, flexibility, and response times.

DeLone and McLean (1992) mention According to Information Systems Success Model emphasizes system quality as a crucial dimension for assessing the success of information systems. It evaluates technical attributes like reliability, response time, availability, and ease of use, ensuring efficient and effective performance.

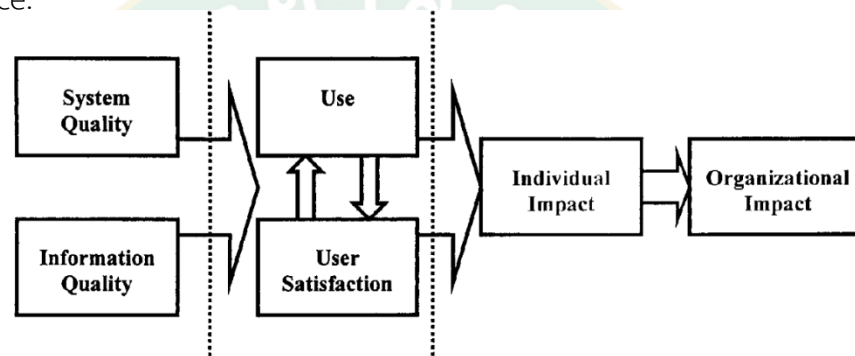


Figure 18 Presents the Original D and M IS Success Model

Source: DeLone and McLean (1992)

The 2003 revision of the model reaffirmed this importance, highlighting the significance of technical excellence in achieving overall success. A high level of system quality indicates a well-performing and efficient information system, contributing to user satisfaction and successful system implementation. The DeLone and McLean Information Systems Success Model assesses system quality through five dimensions, focusing on performance and user satisfaction, ensuring overall success such follows: (DeLone and McLean, 2003).

1) Adaptability is a crucial aspect of system quality, ensuring a system can accommodate changes and evolve to meet new requirements and technological advancements, emphasizing flexibility and agility.

2) Availability is crucial for a system's operational and accessibleness, minimizing downtime and ensuring consistent availability for users.

3) Reliability in system quality refers to a system's consistency in delivering accurate, dependable results, fostering user trust through error-free performance and avoiding failures.

4) Response time measures system speed in processing user requests or commands, ensuring quick feedback and a positive user experience and efficiency.

5) Usability assesses a system's ease of use, navigation, and satisfaction, ensuring intuitive, easy learning, and interaction, enhancing user experience and overall satisfaction.

In this research, the investigation is rooted in the framework introduced by DeLone and McLean's Information Systems Success Model (1992) and its subsequent revision in 2003. This model offers a comprehensive structure for evaluating the effectiveness of information systems, with a particular emphasis on the pivotal role played by system quality. Its core dimensions—such as adaptability, availability, reliability, response time, and usability—serve as critical benchmarks for gauging performance and user satisfaction. Leveraging the insights from DeLone and McLean's model, this study endeavors to appraise and ensure the successful implementation of the system by prioritizing user satisfaction and overall system performance.

Concepts, Theories, and Research Related to Information Quality

Information Quality Concepts

Data and information are essential components in the information age, serving as raw materials for managerial and professional work. Data is a fact and value assigned to a variable, critical for managerial and professional work. Information, on the other hand, is useful data processed to increase the knowledge of the person using the data. Translating information into knowledge requires personal experience and reflection, generating decisions and new knowledge. Knowledge management, which combines tangible and intangible data elements, helps organizations extract the maximum benefit from resources. Data quality is emerging as a discipline, with research programs at universities like MIT's Sloan School of Management Information Quality Programme. Effective management of information as a product, such as Six Sigma and Total Quality Management, is essential. However, data quality refers to data that is fit for use by data consumers, while information quality focuses on meeting customer expectations. The user influences information quality, as the user influences the process (Alshikhi and Abdullah, 2018).

Data Quality refers to the assessment of data to ensure its accuracy, completeness, reliability, and suitability for its intended purpose. It encompasses various characteristics, including accuracy, completeness, consistency, timeliness, and relevance. High-quality data is essential for informed decision-making, analytics, and operational efficiency across various domains. Ensuring data quality involves processes like data validation, cleansing, profiling, and adherence to defined standards (Zhang et al., 2019).

Data quality, according to Redman, is the condition where data is suitable for its intended uses in various operational, decision-making, and planning processes. In essence, data should meet the requirements and expectations set for it (Redman, 1998).

English (1999) defines data quality as the degree to which data conforms to the requirements and expectations of data consumers. This conformity involves ensuring that data possesses the necessary characteristics, values, and is free from defects.

Wang and Strong (1996) describe data quality as data that is relatively error-free, consistent, and closely aligned with the specific business requirements. This definition underscores the importance of data accuracy and alignment with business needs.

Data quality involves evaluating and ensuring data meets specific standards, ensuring accuracy, completeness, consistency, timeliness, and relevance. It is crucial for informed decision-making, analytics, and effective operations. Achieving data quality involves validation, cleansing, profiling, and adherence to defined requirements, ensuring data reliability, trustworthiness, and suitability for its intended purposes.

Characteristics of Data Quality

Characteristics of Data Quality encompass various aspects that determine the reliability and utility of data for decision-making and analysis. These characteristics typically include:

Table 1 Characteristics of Data Quality

No.	Author	Characteristics of Data Quality
1	Thomas Redman (1998)	Accuracy, Completeness, Reliability, Suitability
2	Larry English (1999)	Accuracy, Completeness, Consistency, Timeliness, Relevance
3	Wang and Diane (1996)	Accuracy, Completeness, Consistency, Timeliness, Relevance, Validity, Reliability, Precision, Conciseness
4	Wang and Veda (2013)	Accuracy, Consistency, Completeness, Interpretability
5	William (2002)	Accuracy, Consistency, and Integrity
6	Kenett and Shmueli (2013)	Data Accuracy, Consistency, Completeness, Reliability

Source: Summarize by author, 2023

Research on Information Quality

Benmoussa et al. (2018) summarized the information quality from several authors, such as Petter and McLean (2009), DeLone and McLean (2003), and Gorla et al. (2010), for his research, showing that information quality (IQ) is a crucial aspect of an information system's output, affecting accuracy, timeliness, reliability, and completeness. It significantly impacts the use of the system and is influenced by system, information, and service quality. The impact of these factors on information system efficiency is significant. According to Michnik and Lo (2009) Quality information is crucial for modern enterprise communication processes, establishing and strengthening communication channels. Small businesses with limited access to large amounts of information can operate relying on their own experience, while large businesses need a well-established information system for global operations. In their research, the IQ depends strongly on organization of the information system (IS) and how the information is processed. They mention the dimensions of information quality have been adjusted. They are divided into four dimensions: (1) intrinsic, (2) contextual, (3) representational, and (4) accessibility. In managerial practice, strategic decision situations often involve conflicting criteria and limited alternatives. The model, based on Electre methodology, focuses on comparative assessments of decision-making, unlike Electre methodology, which focuses on a single decision.

DeLone and McLean (2003) in their information systems success model, emphasize the importance of information quality (IQ) as a critical dimension. These dimensions collectively address different aspects of information quality that impact user satisfaction and the effectiveness of information systems. They break down information quality into several key components, including:

- 1) Completeness evaluates a system's thoroughness and comprehensiveness, ensuring all necessary details and data are present for its intended purpose.
- 2) Ease of understanding evaluates user comprehension of system information, focusing on clarity, simplicity, and avoiding jargon or complexity to ensure user comprehension.
- 3) Personalization in information quality refers to a system's ability to tailor information to individual user preferences, providing relevant and customized information for diverse users.
- 4) Relevance assesses a system's alignment with user needs and objectives, determining if information is relevant and valuable for tasks or decisions.
- 5) Security safeguards information from unauthorized access, disclosure, or alteration, ensuring confidentiality, integrity, and availability only to authorized users.

Bahari and Mahmud (2018) mention the information quality refers to soft-result characteristics of information systems (IS), including 1) accuracy, 2) timeliness, 3) reliability, and 4) completeness. It serves as the foundation for modern communication processes and is measured by IQ, which includes accuracy, timeliness, completeness, relevance, and consistency.

Sedera et al. (2004), cited in Petter et al. (2008) developed a multi-dimensional IS success instrument for enterprise systems, tested in three studies. The instrument includes four dimensions: system quality, information quality, individual impact, and organizational impact. It includes setting dimensions: 1) availability, 2) usability, 3) understanding, 4) relevance, 5) format, and 6) conciseness.

Zaidi et al. (2014) assert that evaluations of e-government frequently prioritize key variables such as strategies, technology, organization, and effectiveness. Nevertheless, the evaluation of e-service quality holds significant importance as a primary metric for measuring performance. The individual in question has formulated indicators for government e-services pertaining to system quality, information quality, and service quality, drawing upon the works of other writers, including DeLone and McLean, as well as Narasimhaiah et al. The provided information is outlined as follows: The concept of information quality pertains to the outcomes generated by information systems, with a specific focus on its use within the realm of e-government. The concept incorporates several key dimensions, namely 1) accuracy, 2) timeliness, 3) relevance, 4) precision, and 5) completeness, as outlined by DeLone and McLean in their seminal work. Narasimhaiah et al. categorized information quality into content and format. Content measures the relevance and accuracy of information presented to users, while format measures the presentation and ease of understanding.

Zaidi et al. (2014) employed data quality indicators derived from the works of DeLone and McLean, as well as Narasimhaiah et al., to align with the specific needs of their company, its external environment, and other relevant contextual factors. The author provided definitions for the indicators listed below.

- 1) Relevance
- 2) Completeness
- 3) Accuracy of information
- 4) Timeliness
- 5) Ease of understanding

Table 2 The Distinction Between Information Quality and Data Quality

No.	Author	Data Quality		Information Quality	
		Definition	Scope	Definition	Scope
1	Thomas Redman (1998)	Data quality, as emphasized by Thomas C. Redman, primarily focuses on the assessment and assurance of the intrinsic properties of raw data. It involves ensuring that data is accurate, consistent, complete, reliable, and conforms to predefined standards.	Data quality pertains to the characteristics and attributes of individual data elements or records in their raw, unprocessed form. It is concerned with the "fitness for purpose" of data.	Information quality, according to the general principles of Thomas C. Redman, extends beyond raw data. It encompasses the evaluation of data after processing and interpretation to derive meaningful and useful information. Information quality includes factors such as the relevance, timeliness, and appropriateness of the processed data in meeting specific information needs.	Information quality evaluates the overall quality and value of information derived from data, considering its context and its ability to support decision-making and other information-related tasks.
2	Larry (1999)	Data quality, as emphasized by Larry P. English, primarily focuses on the assessment and assurance of the intrinsic properties of raw data. It involves ensuring that data is accurate, consistent, complete, reliable, and conforms to predefined standards.	Data quality pertains to the characteristics and attributes of individual data elements or records in their raw, unprocessed form. It concerns the "fitness for purpose" of da	Information quality, on the other hand, extends beyond raw data. It encompasses the evaluation of data after processing and interpretation to derive meaningful and useful information. Information quality includes factors such as the relevance, timeliness, and appropriateness of the processed data in meeting specific information needs.	Information quality evaluates the overall quality and value of information derived from data, considering its context and its ability to support decision-making and other information-related tasks.

Table 2 (Continued)

No.	Author	Data Quality		Information Quality	
		Definition	Scope	Definition	Scope
3	Wang and Diane (1996)	Data quality refers to the assessment of raw data to ensure its accuracy, consistency, completeness, and other attributes that make it suitable for its intended purpose.	Data quality pertains to the characteristics and attributes of individual data elements or records in their raw, unprocessed form. It is concerned with the "fitness for purpose" of data.	Information quality encompasses the assessment of information derived from data, including its accuracy, relevance, usefulness, and how well it serves its intended purpose.	It goes beyond the raw data and considers how well the processed data meets the information needs of users.
4	David Loshin (2008)	Data quality, as highlighted in Loshin's work, pertains to the assessment and assurance of the intrinsic properties of raw data. It involves ensuring that data is accurate, consistent, complete, reliable, and conforms to predefined standards.	Data quality pertains to the characteristics and attributes of individual data elements or records in their raw, unprocessed form. It concerns the "fitness for purpose" of data.	Information quality, according to David Loshin's general principles, extends beyond raw data. It encompasses the evaluation of data after processing and interpretation to derive meaningful and useful information. Information quality includes factors such as the relevance, timeliness, and appropriateness of the processed data in meeting specific information needs.	Information quality evaluates the overall quality and value of information derived from data, considering its context and its ability to support decision-making and other information-related tasks.

Source: Summarize by author, 2023

Data quality and information quality are related but distinct concepts in the context of information management. While data quality focuses on the quality of raw data, information quality pertains to the overall quality of information derived from that data after processing and interpretation.

This study will utilize the concepts established by Faizan et al. (2014) to evaluate the variable of information quality. Faizan et al.'s framework provides essential dimensions or indicators that are pivotal for gauging the quality of information. By integrating and applying these concepts within the research, this study aims to comprehensively measure and assess information quality. This utilization ensures a robust and defined approach to evaluating the quality of information within the context of the study.

Service quality Concept

Rust and Oliver (1993) mention service quality is a subjective concept, making understanding customer thoughts crucial for effective management. Satisfaction is a cognitive and affective reaction to a service incident or long-term relationship. It results from experiencing a service quality encounter and comparing it to expectations. Service quality can be measured incident-specific or cumulatively, and value encompasses both quality and price. Effective management requires working knowledge of service quality, as it has meaning beyond economic analysis.

Ramya, Kowsalya, and Dharanipriya (2019) mention service quality is the assessment of a service's conformity to client expectations, used by service business operators to improve service, identify issues, and improve customer satisfaction. This paper aims to understand service quality models and their various dimensions.

Caruana et al. (2000) mention understanding the interactions between service quality, satisfaction, and value is crucial for effective management in the service sector. These constructs play a significant role in determining customer choices, relationships, retention, and long-term profitability.

According to information systems success model, in its 2003 revision, introduces "service quality" as one of the key dimensions for evaluating the success of information systems. Service quality assesses the extent to which an information system meets the needs and expectations of its users by providing effective and responsive services. It considers factors such as system reliability, user support, and the overall quality of interactions between users and the system. A high level of service quality is crucial for user satisfaction and the ultimate success of an information system, emphasizing the importance of user-centric design and support (DeLone and McLean, 2003).

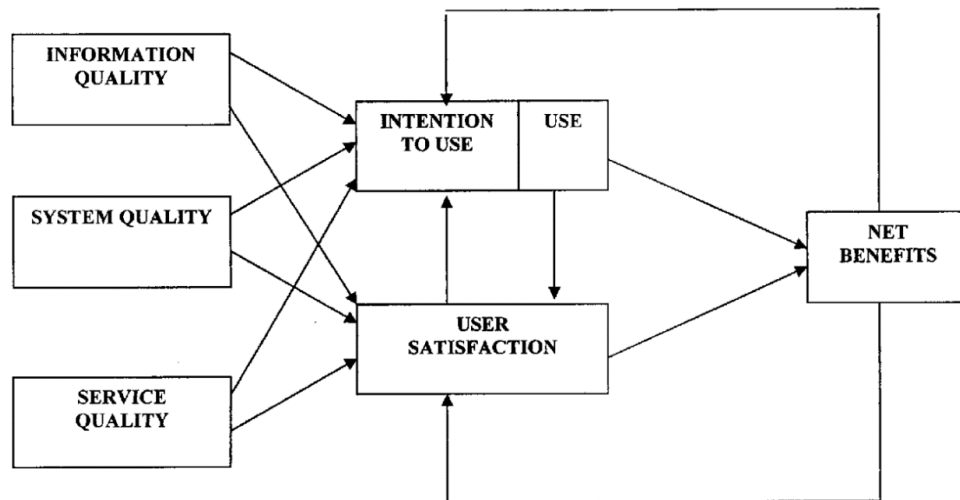


Figure 19 Update D and M IS Success Model

Source: DeLone and McLean (2003)

There are three primary dimensions that contribute to the concept of quality: information quality, systems quality, and service quality. These dimensions have an impact on the utilization and satisfaction of users. The model also recognizes the strong correlation between "use" and "user satisfaction," where favorable experiences result in higher levels of satisfaction and a stronger inclination to continue using the product or service (DeLone and McLean (2003).

Kumasey (2014) referenced service quality and customer satisfaction are related concepts, but they differ in their perceptions. Service quality is based on long-term cognitive evaluations of an organization's service delivery, while customer satisfaction is a short-term emotional reaction to a specific service experience. Customers can use their satisfaction or dissatisfaction levels to update their perceptions of service quality, as they must experience a service before they can be satisfied or dissatisfied with the outcome.

Faizan et al. (2014) referenced several authors in their discussion of service quality, including DeLone and McLean as well as Narasimhaiah et al. In the context of public sectors, service quality serves as a pivotal metric encompassing elements of user focus, user satisfaction, and outcomes. Specifically, it pertains to the effectiveness of e-government communication channels employed by citizens. Notably, DeLone and McLean introduced an enhanced model of information system success by introducing 'service quality' as a novel dimension. Narasimhaiah et al., on the other hand, employed dimensions such as reliability, assurance, responsiveness, and empathy for measuring service quality."

Parasuraman et al. (1985) mention developed the SERVQUAL model in 1985. This model is a well-known framework for assessing service quality. The SERVQUAL model has been widely used in various industries to measure and enhance customer satisfaction and service quality.

Shahin (2006) mention the SERVQUAL instrument can be modified to assess internal service quality provided by departments and divisions. Organizations can assess five dimensions of service quality to determine the level of services provided and identify areas for improvement. Regular employee contact and service experiences are essential for improving service quality. Understanding internal service quality dimensions helps organizations assess their performance and identify weaknesses for improvement. Future research should explore the relationship between internal service quality and external customer satisfaction, as well as employee service orientation and external service quality. Understanding customer perception and measuring service quality benefits industry professionals in both quantitative and qualitative ways.

There are three key aspects of service quality (Parasuraman et al., 1985):

- The evaluation of service quality is difficult for consumers compared to the evaluation of items quality.
- Service quality perceptions are formed when consumers compare their expectations with the actual execution of the service.
- Quality assessments are not just based on the end result of a service, but also encompass evaluations of the service delivery process.

Upon analyzing the substance of the ultimate components constituting each of SERVQUAL's five dimensions (comprising three original dimensions and two combined dimensions), the following designations and succinct explanations for the dimensions were proposed as follows (Parasuraman et al., 1988).

(1) Tangibles: This dimension assesses the physical aspects of service, such as facilities, equipment, and appearance of personnel. It emphasizes the importance of creating a favorable first impression.

(2) Reliability: Focuses on ability to perform the promised service dependably and accurately. Customers expect services to be reliable and error-free.

(3) Responsiveness: This dimension measures the willingness and ability of service providers to assist customers promptly and effectively. It includes elements like quick service and responsiveness to inquiries or complaints.

(4) Assurance: Assurance relates to the Knowledge, competence, courtesy, credibility, and trustworthiness of service providers. It ensures customers feel confident in the professionalism and expertise of the service provider.

(5) Empathy: Empathy involves understanding and caring for the individual needs and feelings of customers. It goes beyond fulfilling functional requirements and focuses on personalized service and emotional support.

The "Relative Importance of SERVQUAL Dimensions" is a framework for evaluating and assigning priorities to the five key dimensions of the SERVQUAL model: Tangibles, Reliability, Responsiveness, Assurance, and Empathy. This helps organizations prioritize their efforts to improve service quality effectively, allocating resources to areas with the most significant impact on customer satisfaction, ultimately leading to better service delivery and retention (Berry et al., 1994), as follow Table 3:

Table 3 The prioritization of SERVQUAL dimensions

Dimension	Priority According to Customer Requirements (%)
Reliability	32
Responsiveness	22
Assurance	19
Empathy	16
Tangibles	11

Source: Berry et al. (1994)

Service quality is a subjective construct that requires understanding customer perceptions and expectations to develop effective managerial strategies. Satisfaction is a complex cognitive and emotional response, while value is a synthesis of perceived quality and services considerations. Understanding service quality models is crucial for enhancing service provision, identifying issues, and fostering customer satisfaction. Strategic decision-making and operational effectiveness are crucial service sector management. Although interconnected, they diverge in terms of perceptual nuances, and customers use satisfaction or dissatisfaction as critical markers for recalibrating overall assessments of service quality.

This study intends to utilize Parasuraman et al.'s (1985) SERVQUAL model as a framework for measuring the service quality variable. Introduced in 1985, the SERVQUAL model is renowned for assessing service quality, offering a widely accepted framework used across multiple industries to evaluate and improve both customer satisfaction and service quality.

Concepts, theories, and research related to service satisfaction

Service Satisfaction Concepts

According to Oliver and Richard (2014), satisfaction represents an individual pursuit achievable through the consumption of products and services, wherein consumers aim to attain pleasurable fulfillment. This sense of satisfaction signifies the degree of contentment derived from the consumption experience, encompassing both under- and over-fulfillment. The quest for satisfaction is largely unanimous among consumers, motivated by several reasons:

Desirable End-State of Consumption: Satisfaction, in itself, serves as a sought-after endpoint within the consumption process, representing a reinforcing and pleasurable experience.

Mitigation of Redress Actions: Satisfaction mitigates the necessity for further corrective actions or the consequences of a potentially regrettable decision.

Affirmation of Decision-Making Competence: It also acts as a validation of the consumer's adeptness in decision-making.

From a defining by Giese et al. (2000) Satisfaction is an affective response with varying intensity, focusing on product choice, purchase, and consumption. It is a holistic evaluative outcome, with cognitions playing a role. The focus is on the consumer's state, and timing refers to the temporal existence of satisfaction. Timing is crucial for accurate and well-formed responses in product acquisition and consumption. Meanwhile, a defining by Biesok and Wyród-Wróbel (2011) corresponds to Giese, Joan and Cote, Joseph. They defined that Satisfaction or dissatisfaction is a subjective feeling influenced by individual perceptions and emotions, and is linked to fulfilled or unfulfilled expectations in a product or service. Client satisfaction is linked to positive impressions, while dissatisfaction is linked to lack of positive incentives. Market reviews are diverse and subjective, affecting both products and services. There are three types of satisfaction:

1. Partial or global satisfaction.
2. Current or accumulated satisfaction.
3. Independent or comparative satisfaction

Kucukosmanoglu and Sensoy (2010) conducted a study involving 122 individuals aged between 18 and 50, aimed at investigating the determinants affecting customer satisfaction. Their research revealed that key factors influencing satisfaction encompassed the product's alignment with customer needs, the perceived quality and value of the product, and the emotional aspects associated with the purchase. The study interestingly found that surpassing customer expectations was not imperative for achieving satisfaction. Additionally, effective purchase planning and clear expectations emerged as pivotal factors. Moreover, the study underscored that the relationship with the product and its manufacturer held greater significance than

the relationship with the seller. Contrary to expectations, the research did not establish a substantial correlation between the price of the product and other elements within the marketing mix concerning customer satisfaction. Refer to Figure 20 for a detailed representation of the examined satisfaction attributes.

The attributes related to product	The attributes related to purchasing process	The attributes related to feelings
Price	Planning purchase	Positive emotions
Exceeding expectations	Promotion	Customer's experience
Fulfilling requirements	Image of the seller	Affirmation of the product
Customer-friendly orientation of producer	Customer service	Perception of the good's value
	Clarified expectations	Perception of the good's quality
	Extended decision-making process	Delight
		Loyalty to the seller

Figure 20 Attributes of Satisfaction Studied in the Research

Source: Biesok and Wyród-Wróbel (2011)

According to Kucukosmanoglu and Sensoy (2010), a customer satisfaction index ranging between 70 to 80 out of 100 may be regarded as acceptable within a business framework. Their research identifies factors influencing customer satisfaction, such as product-related attributes, the purchasing process, and the emotional aspect of the buyer's experience. The study underscores that satisfaction is notably shaped by the product's alignment with customer needs, the perceived quality, and the value associated with the product, alongside the positive emotional aspects of the purchase. Intriguingly, surpassing customer requirements does not appear to be indispensable in achieving satisfaction. Moreover, an alternative perspective on satisfaction includes the role of past experiences and disconfirmation results as supplementary factors, allowing customers with diverse backgrounds to assess performance differently. The notion of expectation is posited as an adaptive mechanism, as expounded by Oliver (1980, as cited in Kucukosmanoglu and Sensoy (2010)). 'Within various business sectors, particularly in service-oriented industries, the acknowledgment of occasional consumer dissatisfaction is prevalent. Consumer responses to dissatisfaction typically involve three distinct activities, as identified in Richins (1983, as cited in Kucukosmanoglu and Sensoy, 2010):

Brand or store switching, known as 'exit.'

Directly expressing dissatisfaction by making a complaint to the seller, known as 'voice.'

Sharing negative experiences with others, termed as 'negative word-of-mouth.'

Furthermore, Biesok and Wyród-Wróbel (2011) emphasize the influence of multiple factors on customer satisfaction, delineating three primary levels: product quality, perceived value, rational decision-making processes, and the role of positive emotional experiences.

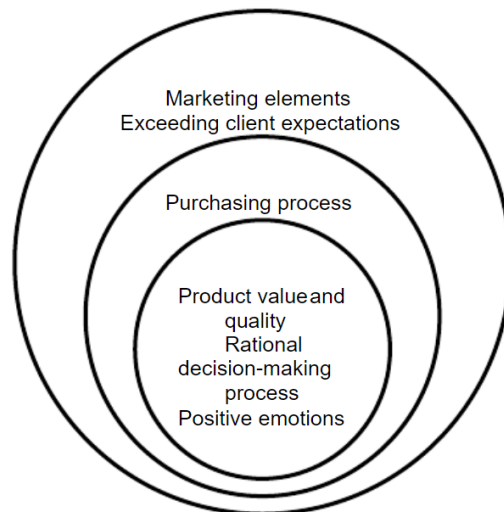


Figure 21 Core and Less Important Factors of Customer Satisfaction

Source: Biesok and Wyród-Wróbel (2011)

Service Satisfaction Theories

Service satisfaction is a vital concept in the field of service quality and reflects customers' overall contentment with a service experience. It is often measured through customer feedback and evaluations.

Parasuraman, Zeithaml, and Berry (1985) introduced the SERVQUAL model, a framework that delineates five essential dimensions of service quality: reliability, assurance, responsiveness, empathy, and tangibles. According to Parasuraman et al. (1985), service satisfaction is intricately associated with the perceived quality across these dimensions. Oliver's (1980) satisfaction-confirmation model posits that service satisfaction arises when perceived service quality exceeds customer expectations. This model underscores the importance of effectively managing customer expectations to enhance overall satisfaction levels. Gronroos (1984) highlights the significance of service encounters in molding service satisfaction. He asserts that customer assessments are shaped by their engagements with service providers in these encounters. Bitner (1990) broadens the scope of service encounters to encompass not only the physical environment but also the service delivery process. Service satisfaction is viewed as an outcome stemming from the comprehensive customer experience. Heskett et al. (1994) introduced the "Service-Profit Chain," emphasizing the correlation between employee satisfaction, customer satisfaction,

and financial performance. They suggest that service satisfaction plays a crucial role as a factor contributing to business success. In essence, service quality satisfaction denotes the degree of gratification or endorsement that customers feel during their engagement with a specific service. It signifies how effectively a service meets or surpasses the expectations of customers. Elevated service quality satisfaction generally fosters customer loyalty and positive word-of-mouth, while diminished satisfaction may lead to customer discontent, grievances, and potential revenue loss. Service quality satisfaction stands as a pivotal element for business triumph, as it significantly influences customer loyalty, brand standing, and overall financial success. Businesses that prioritize and invest in delivering exceptional service quality are poised to excel within the competitive market milieu.

Research Related to Service Satisfaction

Zygiaris et al. (2022) conducted research delving into the impact of service quality on customer satisfaction within the post-pandemic auto care industry. The study utilized the SERVQUAL framework to explore the correlation between service quality and customer satisfaction. Findings revealed that empathy, reliability, assurance, responsiveness, and tangibles significantly influence customer satisfaction. Auto care workshops are advised to acknowledge these factors and provide personalized attention, warm greetings, timely completion of services, notification of additional repair needs, and transparent problem-solving procedures. Moreover, it's essential for these workshops to carefully select and train staff who can courteously communicate repair services and associated risks. Timely service delivery stands as a critical factor in enhancing both service quality and customer satisfaction. Khoo (2022) investigates the impact of service quality on corporate image, customer satisfaction, revisit intention, and word-of-mouth recommendations. The study identifies that service quality significantly impacts both corporate image and customer satisfaction, with corporate image also positively influencing word-of-mouth recommendations. Moreover, customer satisfaction shows a notable positive influence on both revisit intention and word-of-mouth referrals. The study highlights the substantial mediating effect between corporate image and customer satisfaction across most relationships.

Khadka et al.'s (2017) study underlines the pivotal role of customer satisfaction and loyalty in determining a business's success. Emphasizing a vast customer base is crucial for achieving long-term objectives. This thesis endeavors to scrutinize the nexus between customer satisfaction and loyalty, focusing specifically on the Travel industry and its clientele. The research scrutinizes the determinants influencing customer satisfaction and loyalty while offering recommendations to augment service quality and enhance customer retention. Employing both quantitative and qualitative research methods, including a questionnaire disseminated to Travel's customers over a one-month period, the study's outcomes reveal an overall positive perception of Travel's existing service level, with customers displaying high satisfaction. However,

identified areas for enhancement encompass the refinement of feedback systems, staff training initiatives, and the implementation of regular advertising campaigns to attract new customers and apprise existing ones of forthcoming events. Lee et al. (2016) applied the Taiwan Customer Satisfaction Index model to assess a tourism factory in Taiwan, examining customer satisfaction and loyalty. Their findings revealed that perceived quality had the most substantial impact on satisfaction for both content and discontent customers. When considering customer loyalty, satisfaction held more significance than image for content and discontent customers. The paper suggests employing two levels of satisfaction within the CSI models to assist managers in tourism factories to effectively enhance customer satisfaction. This approach is deemed more suitable for resource allocation and determining priorities in managing customer satisfaction compared to conventional techniques.

Chattopadhyay (2019) published a research paper that underscores the vital role of customer satisfaction and loyalty in achieving business success. The study emphasizes the importance for businesses to place a strong emphasis on cultivating a large customer base while integrating these aspects into their long-term objectives and strategic frameworks. The paper delves into an analysis of the interconnection between customer satisfaction and customer relationship, with a particular focus on measures of service quality. It investigates the factors that impact customer satisfaction and loyalty, and offers recommendations for enhancing service quality and retaining customers. The Customer Satisfaction Index (CSI) emerges as an economic indicator, foreseeing consumer expenditure and corporate earnings, and providing a foundation for the implementation of new strategic marketing management strategies geared towards achieving sustainability.

Related Research

This research endeavors to uncover the determinants shaping users' satisfaction with WeChat's official accounts. Employing a sample size of 204 respondents, it amalgamates theories encompassing Information System Success, the Theory of Reasoned Action, and the Technology Acceptance Model. Numerous variables were scrutinized to assess user satisfaction. The study's findings underscore the significance of information quality, system quality, service quality, perceived usefulness, ease of use, and attitude as influential factors significantly impacting users' satisfaction (Tian and Xu, 2017). Several additional scholarly investigations have similarly explored this domain.

Regarding WeChat use among college students, Zhang et al. (2019) highlighted its positive effects on campus life satisfaction. Their research emphasized how social media, particularly WeChat, contributes to the accumulation and maintenance of social capital among college students. It was found to be closely associated with fostering 'weak-tie' relationships in networks. WeChat usage among students facilitated

the maintenance of these 'weak-tie' connections, predicting the level of social capital maintenance and the strength of 'weak-tie' communication. These connections often serve as sources of novel information and interpersonal resources.

In terms of interpersonal interactions, research suggests that college students' campus interactions significantly influence their social development. The study underscores the importance of facilitating the integration of college students, especially those with low self-esteem, into a harmonious university life. Leveraging new media platforms like WeChat and providing educational activities aligned with their expectations and needs are essential. Moreover, the intensity of WeChat usage correlates positively with social capital and directly impacts campus life satisfaction. Encouraging the judicious use of new media has a positive guiding effect on the physical and mental development of college students in the contemporary era. Notably, the analysis revealed no substantial demographic differences, suggesting potential for broader sample representation. Zhang and Lu (2022) conducted a comprehensive examination of key evaluation indicators to gauge service satisfaction with WeChat official accounts in Chinese academic libraries. Through the integration of the updated DeLone and McLean (D and M) model along with the Delphi method, they developed an assessment system for ALWCOA (Academic Library WeChat Official Accounts) satisfaction. This assessment system consisted of three evaluation dimensions and 15 indicators. The study identified three pivotal evaluation indicators: service responsiveness, information timeliness, and system security. Furthermore, the research strongly advocates that academic libraries should prioritize the enhancement of service responsiveness, information timeliness, and system security. Wang, Sheng, Chen, Liu, and Jiang (2023) conducted a study aimed at modeling and proposing seven hypotheses to identify influential factors. Utilizing a questionnaire survey and statistical analysis with SPSS and AMOS software, the researchers assessed data reliability and validity. Employing structural equation modeling, the study unveiled that the primary determinants influencing user attention towards Genting's official WeChat account include information quality, system quality, curiosity psychology, knowledge-seeking psychology, and entertainment psychology. Notably, within the research's hypotheses, a significant observation emerged. The findings suggest that service quality has minimal influence on user attention. This discovery challenges the assumption that users engage with the WeChat public account solely for its services and instead implies their engagement for other factors, such as the previously mentioned information and system quality. Khan, Liang, and Shahzad (2015) conducted a comprehensive investigation into the factors influencing customer satisfaction within e-commerce platforms in China, focusing on the perceptions and experiences of online consumers (OCs). The study utilized a questionnaire survey, gathering 302 usable responses, and employed multiple regression analysis to identify seven constructs—price, convenience, product information, return policy, financial risk, product risk, and delivery risk—significantly impacting customer satisfaction and

subsequent repurchase intention. The research underscores the pivotal role of customer satisfaction, emphasizing its capacity to provide heightened benefits and reduce risks associated with repurchasing within e-commerce environments. The study's findings offer valuable insights for e-store managers, enabling a better understanding of customer perceptions and satisfaction within online shopping platforms. According to Aljazzaf, Perry, and Capretz (2010), trust is characterized as the trustor's willingness to rely on a trustee to fulfill commitments, irrespective of their capability to oversee or regulate the trustee's actions. A reliable entity, deemed trustworthy, adheres to its designated role, reciprocates trust by fulfilling their obligations, and upholds a positive disposition toward the trustor's goodwill and well-being. Trustworthy entities demonstrate reliability, timeliness, and a commitment to safeguarding personal information.

Research Framework

A research study on 'An Exploration Of Factors Influencing University Students' Satisfaction With WeChat Services In Xi'an City Shaanxi Province, China'. An Empirical Investigation of Influential Factors" Upon conducting a comprehensive analysis of the existing literature, relevant ideas and concepts were incorporated to establish the independent and dependent variables that will be examined in this study. These variables include: The theory and concept of encompasses various dimensions, including system quality, information quality, service quality, and satisfaction.

The relationship between the independent variable and the dependent variable of the integrated model is shown in Figure 22.

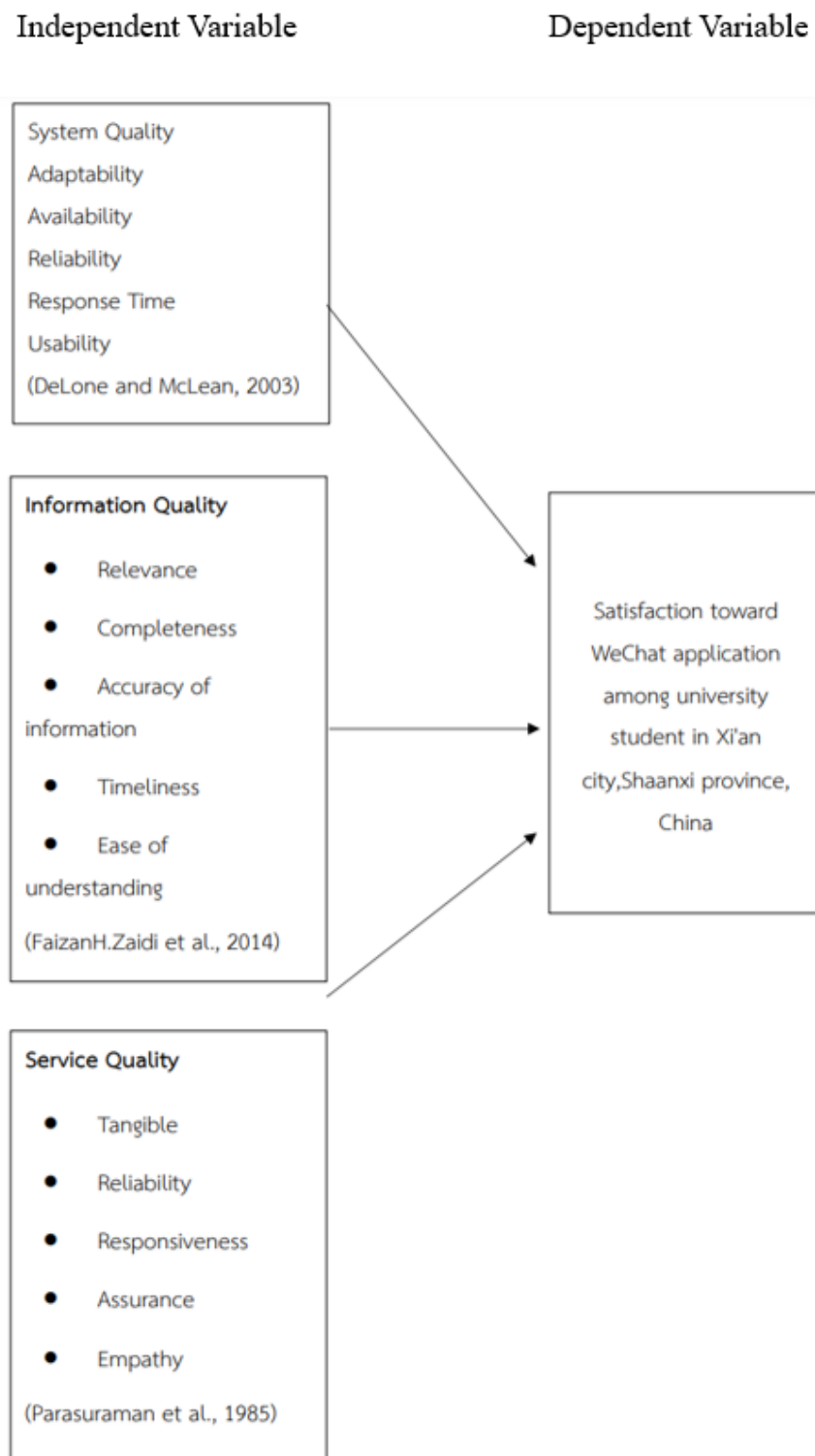


Figure 22 The Research Framework

Research Hypotheses

H1: System quality has an influence on satisfaction with the WeChat official account application among Xi'an City, Shaanxi Province University students in China.

H2: Information quality has an influence on satisfaction with the WeChat official account application among Xi'an City, Shaanxi Province University students in China.

H3: Service quality has an influence on satisfaction with the WeChat official account application among Xi'an City, Shaanxi Province University students in China.



CHAPTER III RESEARCH METHODOLOGY

In this chapter, a comprehensive exposition of the research methodology utilized in the study titled "An Exploration of Factors Influencing University Students' Satisfaction with WeChat Services in Xi'an City, Shaanxi Province, China" is presented. The research methodology functions as the overarching framework through which the research questions, research objectives, research hypotheses, and research framework are systematically addressed. It delineates the structured approach employed for data collection and analysis, thereby upholding the study's rigor and validity.

The subsequent sections of this chapter will delve into the specifics as follows:

1. Research Design
2. Population and Sample
 - 2.1 Population
 - 2.2 Sample
 - 2.3 Sample selection method
3. Research Data
 - 3.1 Primary Data
 - 3.2 Secondary Data
4. Research Instrument
5. Quality Testing of Research Instruments
6. Data Collection
7. Data Preparation and Data Analysis
 - 7.1 Data Preparation
 - 7.2 Data Analysis
8. Research Duration
9. Research Budgeting

Research Design

In this section, the chosen research design for the study is presented, employing a quantitative approach. The research aims to assess the factors influencing university students' satisfaction with WeChat Official Account applications in Xi'an City, Shaanxi Province, China, and analyze the impact of system quality, information quality, and service quality on user satisfaction. This research design aligns with the research objectives, which involve a quantitative assessment of these factors and their relationships.

A quantitative approach is employed, utilizing survey questionnaires for data collection. Statistical data analysis is conducted using the SPSS program to summarize results in tables and accompanying discussions.

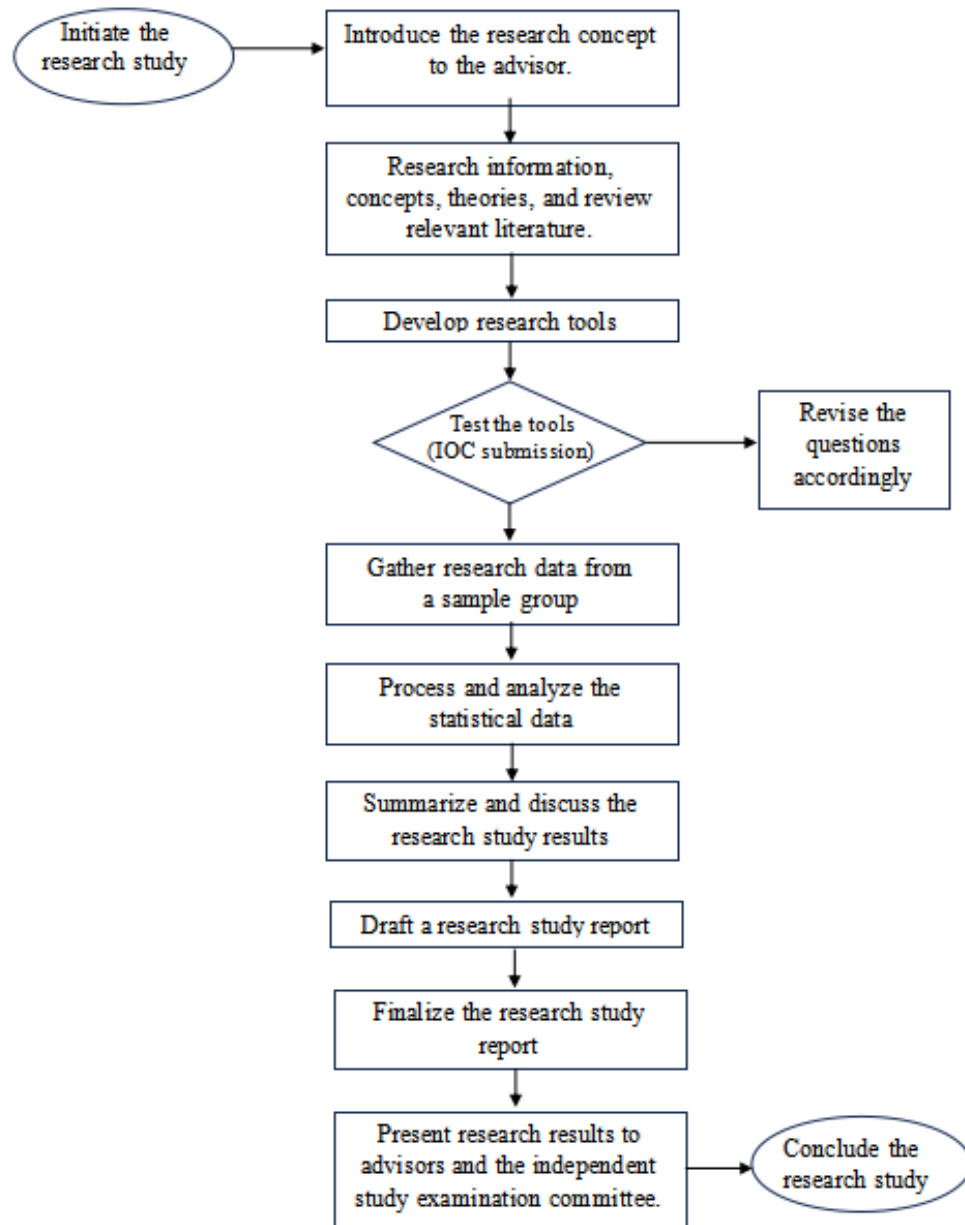


Figure 23 Research Process

Population and Sample

Population

The population used in this study consists of students enrolled in undergraduate and junior colleges within institutions of higher learning in Xi'an City, Shaanxi Province, China, who have previously accessed a university's WeChat Official Account. There are a total of 63 schools, with a combined population of 835,600 individuals (Xi'an Bureau of Statistics National Bureau of Statistics, 2023).

Sample

The sample used in this study comprised students enrolled in undergraduate and junior colleges within higher education institutions in Xi'an, Shaanxi Province, China, who had previously accessed the university's official WeChat account. A total of 400 cases were included, determined using the sample size calculation method developed by Taro Yamane in 1967 (Taro Yamane, 1967). An error margin of 5% was applied, and the calculation is as follows:

$$n = \frac{N}{1 + N(e)^2}$$

In this context:

n represents the sample size.

N represents the population of the study.

e represents the margin of error, which was set at a maximum threshold of 5%, equivalent to 0.05.

Substitute the values into the formula as follows:

$$n = \frac{835,600}{1 + 835,600(0.05)^2}$$

$$n = \frac{835,600}{2090} = 399.80 \approx 400$$

The result of the calculation formula yielded a minimum sample size of approximately 400 individuals.

Sample selection method

In this research, a random sample size was determined using a multi-stage sampling method, the details of which are outlined below:

Step 1: Surveying the Population

The initial step involved conducting a survey of the student population enrolled in undergraduate and junior colleges within institutions of higher learning in Xi'an City, Shaanxi Province, China, who had previously accessed a university's WeChat Official Account. This survey encompassed a total of 63 schools, with a combined population of 835,600 individuals.

Step 2: Classification of Schools

Subsequently, the schools in Xi'an City, Shaanxi Province, China, were categorized into two distinct types: undergraduate and junior colleges. Based on the survey results, the schools were classified according to the type of educational institution, as presented in Table 4.

Table 4 Presents the Schools and Populations Categorized by Educational Institution Type

Type of Educational Institution	Number of Schools (Schools)	Population (People)
Undergraduate 18-22	46	582,663
Junior Colleges	17	252,937
Total	63	835,600

Source: Higher Education Digital Bureau, 2022

Step 3 involves selecting a sample of 400 individuals using proportional stratified random sampling, which accounts for the population within each type of educational institution. The sample size is calculated using the following formula:

$$n_i = \left(\frac{N_i}{N} \right) n$$

In this context:

n_i represents the sample size of each type of educational institution

N_i represents the size of the population in each type of educational

institution

N represents the total population

n represents the total sample size

Next, 50 percent of educational institutions were randomly selected within each type. From these selected institutions, a sample group of 400 individuals was randomly chosen using simple random sampling, as outlined in Table 5.

Table 5 Displays the count of educational institutions, populations, 50 percent randomly selected educational institution types, and the sample sizes for each type of educational institution (type of educational institution)

Type of Educational Institution	Total Number of Educational Institution	Population	The Number of Schools (50 Percent Selection)	Number of Samples
Undergraduate 18-22	46	582,663	23	279
Junior Colleges	17	252,937	9	121
Total	63	835,600	32	400

Source: Author (2023)

Step 4: Distribute the online questionnaire prepared by the researchers and initiate data collection by sending a questionnaire star link to collect responses from 400 online participants.

Research Data

Primary Data

Primary Data comprises information collected through the distribution of questionnaires to students who access the Official Public WeChat Account of the University and engage in discussions on WeChat channels related to the research topic. These channels encompass discussions on WeChat services, user satisfaction, and pertinent aspects.

Secondary Data

Secondary Data encompasses information gathered from various sources, including literature reviews, concepts, theories, and related research on Satisfaction, Service Quality, Information Quality, and System Quality. This category also includes data obtained through internet searches conducted on academic databases, institutional websites, and reputable online sources. These secondary sources played a vital role in shaping the questionnaire and enhancing the overall understanding of the research variables.

Research Instrument

This research employs quantitative data collection methods, primarily utilizing questionnaires and online surveys that incorporate closed-ended questions to collect data and opinions from the selected sample. Furthermore, drawing insights from comprehensive literature reviews, relevant concepts, theories, and previous research, the questionnaire has been meticulously developed to align with the research framework of this study and comprehensively address its research objectives. The questionnaire is structured into 6 parts as follows:

Part 1: Screening Questions

This section of the questionnaire aims to identify respondents who use mobile phones and have previous experience with the WeChat official account application, as specified by the nature of the study. The questionnaire employs a checklist format and consists of two questions:

No.1 Are you currently a student at a university in Xi'an city, China?

1.1) Yes

1.2) No (end of the questionnaire)

No.2 Have you ever used the WeChat official account application?

2.1) Yes

2.2) No (end of the questionnaire)

Part 2: Demographic Characteristics

This section comprises questions about the demographic characteristics of university students, including gender, age, education level, and student status. It employs closed-ended questions with multiple-choice options. Respondents are instructed to select a single answer for each item. The questionnaire employs a checklist format and consists of 5 questions.

No.3 Gender

Gender is measured using a nominal scale in the questionnaire, which presents questions with multiple answers to choose from (Two-Way Question) as follows:

- 3.1) Male
- 3.2) Female

No. 4 Age

Age is a Closed-ended Question. The nature of the questionnaire comprises Multiple Choice Questions and employs an Ordinal Scale type of data measurement. There are answers to choose from as follows (2 items):

- 4.1) Under 18 Years Old
- 4.2) 18 Years Old-22 Years Old
- 4.3) Over 22 Years Old

No. 5 Education Level

Education level is a measurement of Ordinal Scale data. Specify the educational levels in 4 items as follows:

- 5.1) Undergraduate education
- 5.2) Junior college education

No.6 Current Major (Major Category)

Current major is a measurement of Ordinal Scale data. Specify the current in 13 items as follows:

- 6.1) Economics and Management majors
- 6.2) Information Science majors
- 6.3) Urban construction majors
- 6.4) New Media Majors
- 6.5) International Education Majors
- 6.6) Agricultural majors
- 6.7) Biology major
- 6.8) Chemistry major
- 6.9) Physics major
- 6.10) Mathematics major
- 6.11) Environmental majors
- 6.12) Medical majors
- 6.13) Humanities major

Part 3: System Quality Factor

The System Quality Factor questionnaire is in the form of a rating scale consisting of 5 criteria (total of 15 items):

- 1) Adaptability
- 2) Availability

- 3) Reliability
- 4) Response Time
- 5) Usability

Part 4: Information Quality Factor

The Information Quality Factor questionnaire is in the form of a rating scale consisting of 5 criteria (total of 15 items):

- 1) Relevance Completeness
- 2) Accuracy of information
- 3) Timeliness
- 4) Ease of understanding

Part 5: Service Quality Factor

The Service Quality Factor questionnaire is in the form of a rating scale consisting of 5 criteria (total of 15 items):

- 1) Tangible
- 2) Reliability
- 3) Responsiveness
- 4) Assurance
- 5) Empathy

The questions in Part 3 to Part 5 were formulated using a Likert Scale with five assessment levels. This scale enables respondents to express their level of agreement or disagreement with specific statements. The scoring details are as follows:

Most Score	5 points
Very much Score	4 points
Moderate Score	3 points
Low Score	2 points
Lowest Score	1 points

To maintain consistency with the five assessment levels, the researchers utilized the average scores derived from the sample data as a basis for interpretation. The classification was segmented into five levels, employing a scaling approach that delineated comparative criteria. This scaling involved the midpoint of the stratum, where the highest score was 5 and the lowest score was 1. To establish the criterion characteristics within a normal distribution, the determination of the width for each layer was achieved through the following formula:

$$\text{Median} = \frac{\text{Highest Value} - \text{Lowest Value}}{\text{Number of Classes}}$$

$$\text{Median} = \frac{5 - 1}{5}$$

$$\text{Class interval} = 0.8$$

Next, compute the average score level by assigning new scores as follows:

Score Between 4.21 - 5.00 is university students strongly agree.

Score Between 3.41 - 4.20 is university students agree

Score Between 2.61 - 3.40 is university students are not sure

Score Between 1.81 - 2.60 is university students do not agree

Score Between 1.00 - 1.80 is university students strongly disagree.

Part 6: Respondents' Opinions on Satisfaction with Using the WeChat Application'

This section of the questionnaire will be used to measure the satisfaction level of the respondents regarding the use of the WeChat application. It includes a question about overall satisfaction with the use of the WeChat application, employing a 5-level Likert Scale with the following values:

The questions in Part 6 are also used the 5-Likert Scale for level assessment. The ranking are as follows:

Most Score	5 points
Very much Score	4 points
Moderate Score	3 points
Low Score	2 points
Lowest Score	1 points

The 5-point Likert scales, which are rating scales widely used for asking respondents' opinions and attitudes, are utilized to ask the individual higher education students to evaluate the degrees of their agreement with the satisfaction factors toward the Official Public WeChat Account. The evaluation criteria for each class interval can be calculated using a formula to calculate the width of each class as follows:

$$\text{Median} = \frac{\text{Highest Value} - \text{Lowest Value}}{\text{Number of Classes}}$$

$$\text{Median} = \frac{5 - 1}{5}$$

$$\text{Class interval} = 0.8$$

Therefore, the class stratification is 0.80 and is used to categorize the mean and criterion scores with the following descriptions:

Range of Score	Level of agreement
Score between 4.21 – 5.00	indicates that university students are definitely satisfied.
Score between 3.41 – 4.20	indicates that university students are likely satisfied.
Score between 2.61 – 3.40	indicates that university students are uncertain about satisfaction.
Score between 1.81 – 2.60	indicates that university students are unlikely to be satisfied.
Score between 1.00 – 1.80	indicates that university students are definitely not satisfied.

Quality Testing of Research Instruments

The research instrument utilized in this study took the form of a questionnaire. The researcher conducted tests to ascertain both the validity and reliability of the questionnaire. To ensure the creation of a comprehensive and high-quality tool, the researcher adhered to the following steps:

Conducted an extensive literature review to guide the construction of a questionnaire aligned with the research framework. Integrated identified variables into the questionnaire structure.

Submitted the questionnaire to the advisor for review the language, content validity and feedback. Revised the questionnaire based on the advisor's recommendations.

Presented the questionnaire to three experts (see Appendix F). for thorough evaluation, enhancing its accuracy and comprehensiveness in covering the research content. The Experts were tasked with evaluating the consistency between the questions and research objectives using the Item-Object Consistency (IOC) Index for each question. The IOC values were aggregated from the opinions of all experts. The Index of Item Objective Congruence (IOC) was employed as a measure of question-to-content consistency.

The scoring criteria for IOC assessment were as follows:

- +1: When there was a clear correspondence between the questions and the research objectives.
- 0: When uncertainty existed regarding the alignment between the questions and the research objectives.
- 1: When the questionnaire exhibited inconsistency with its objectives.

The IOC value for each question was calculated using the formula:

$$IOC = \Sigma R/N$$

Where:

IOC (or IC) represents the question-to-content consistency index.

ΣR is the sum of expert opinion scores.

N is number of experts.

For a question to be considered valid, it needed to have an IOC equal to or greater than 0.60. Any question with an IOC below 0.60 underwent either elimination or revision until reaching the required threshold.

1) All questions met the criterion for content validity, ranging between 0.67 and 1.00, with a total Item Objective Congruence (IOC) of 0.92 (refer to Appendix E). Subsequently, the reliability of the questionnaire was assessed (see Table 7-9).

2) Reliability Testing of the Questionnaire: The quality of the research tool was evaluated through a pilot test involving a group of university students who were not part of the sample. To assess the accuracy and appropriateness of the questionnaire's reliability, the researcher conducted a pilot test with a sample group of 50 participants before administering the questionnaire to the actual sample. The data collected from the pilot test were analyzed for reliability. The alpha coefficient for the four variable measures exceeded 0.5, with α meeting the minimum requirement of 0.7. This indicates good internal consistency of the questionnaire, meeting the reliability criteria for the study, with a calculated alpha coefficient of 0.859, surpassing the specified threshold of 0.70. Therefore, the questionnaires were deemed reliable and suitable for use with the target populations

Assessing reliability through Cronbach's alpha

Questionnaire testing using Cronbach's method the resulting α coefficient of reliability ranges from 0 to 1 in providing this overall assessment of a measure's reliability. If all of the scale items are entirely independent from one another (i.e., are not correlated or share no covariance), then $\alpha = 0$; and if all of the items have high covariance's, then α will approach 1 as the number of items in the scale approaches

infinity, showing that the questionnaire has high confidence. Coefficients that are less than 0.5 are usually unacceptable, especially for scales purporting to be unidimensional (Cronbach, 1951). In addition, Nunnally (1978) offered a rule that reliability should be greater than or equal to 0.7.

To examine the accuracy and suitability of the questionnaire reliability test the researcher will use the questionnaire to test the pilot test with the test group of 50 samples before using the questionnaire to collect data on the real sample. So that it can be notified to the respondents so that they understand it, the researcher will use the formula of Cronbach (1970) as follows:

$$\alpha = \frac{n}{n-1} \left(1 - \frac{\sum s^2(X_i)}{s^2(Y)} \right) \dots\dots\dots (3.3)$$

In this case;

α refers to Questionnaire reliability value

n refers to the number of scale items

$s^2 (X_i)$ refers to the variance associated with item

$s^2 (Y)$ refers to the variance associated with the observed total scores

In order to further improve the quality of the measurement questionnaire, the first step is to pre-test the small sample data and analyses the reliability and validity of the survey scale. The testing of the pretest questionnaire was divided into two steps: first, the questions were purified using CITC analysis and alpha reliability coefficients, and then the EFA test was conducted on all the questions.

The four variable measures were analyzed in this study, and the initial CITC value for each item of the four variable measures was greater than 0.5, **α** meeting the minimum requirement of 0.7, which indicates that the internal consistency of the questionnaire is good and meets the reliability requirements of the study, and the results are shown in Table 6.

Table 6 System Quality Confidence Test

Variables	Items	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted	Cronbach's α
System Quality	1.The university's WeChat official account has updated its security as appropriate.	45.57	190.530	0.698	0.939	0.943
	2.Improving the university's WeChat official account does not affect the use of the application.	46.82	213.668	0.523	0.942	
	3.The adaptability of the university's WeChat official account, such as operational stability or maintaining an account, will not affect the user's confidence.	45.49	186.735	0.743	0.938	
	4.The university's WeChat official account system meets your needs well.	45.67	190.147	0.665	0.940	
	5.The university's WeChat official account system is available all the time.	45.63	188.078	0.719	0.938	
	6.The university's WeChat official account system is stable; for example, while you are using the connection, it will not be disconnected, etc	45.71	188.732	0.796	0.937	
	7.The platform of university's WeChat official account is safe and reliable.	45.63	186.118	0.749	0.938	

Table 6 (Continued)

Variables	Items	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted	Cronbach's α
	8. prefer to the university's WeChat official account system than the university home page system.	45.82	193.428	0.690	0.939	
	9. believe that the university's WeChat official account system is just as dependable and effective as its website system.	45.73	193.603	0.648	0.940	
	11.The university's WeChat official account system can always be always quickly connected to various functions.	45.39	185.403	0.799	0.936	
	12.The university's WeChat official account system responds quickly to connections to the website.	45.61	184.683	0.796	0.936	
	13.The interface of the university's WeChat official account is concise and clear, and the navigation is easy to use.	45.73	188.083	0.756	0.937	
	14.The university's WeChat official account always have a modern, attractive design such as a graphical user interface, theme color scheme, etc.)	45.39	190.723	0.641	0.940	

Table 6 (Continued)

Variables	Items	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Cronbach's Alpha if Item Deleted	Cronbach's α
15.	The university's WeChat official account has a user-friendly format. Always easy to read, such as clear text, a font size that is easy to read, patterns and colors that do not cause confusion, etc.	45.76	187.264	0.796	0.936	

Source: Author (2023)

Table 7 Information Quality Reliability Test

Variables	Items	Scale Mean		Scale Variance		Corrected Item-		Cronbach's	
		if Item Deleted	if Item Deleted	if Item Deleted	if Item Deleted	Total Correlation	Alpha if Item Deleted	Cronbach's α	
Quality of Information	1.content provided by the university's WeChat official account is rich and comprehensive.	36.94	135.896	0.701	0.932				
	2.The university's WeChat official account provides information in a variety of expressions (such as videos, pictures, audio, text, etc.	36.61	133.723	0.709	0.931				
	3.The information on the university's WeChat official account is highly reliable and of high quality.	36.80	137.881	0.635	0.934				
	4.The information provided by university's WeChat official account is comprehensive, clear, and complete.	36.88	132.346	0.752	0.930			0.936	
	5.The information provided by university's WeChat official account has a wealth of sections such as library, curriculum recommendations, admission, digital resources, etc.)	36.75	134.674	0.689	0.932				
	6.University's WeChat official account can provide the information about university education you need.	36.71	131.212	0.802	0.928				
	7.The university's WeChat official account can push information timely and accurately.	36.82	139.908	0.575	0.936				
	8.The university's WeChat official account clearly mentions when it was last updated.	36.75	135.874	0.691	0.932				

Table 7 (Continued)

Variables	Items	Scale Mean		Scale Variance		Corrected Item-		Cronbach's	
		if item Deleted	if item Deleted	if item Deleted	if item Deleted	Total Correlation	Alpha if Item Deleted	Cronbach's α	
	9.The university's WeChat official account provides timestamp for all information posted and any time sensitive information on the university's WeChat official account (clearly mentions date of last update)	36.71	136.292	0.711	0.931				
	10.Content and illustrations of university's WeChat official account you can easily read and understand, such as curriculum or admission information, etc.	36.57	132.290	0.801	0.928				
	11.Content and illustrations of the university's WeChat official account and advertising media are not complicated and do not cause confusion by the use of letters, colors, images, etc.)	36.78	132.453	0.802	0.928				
	12.Content and illustrations of university's WeChat official account are easy to understand without complicated interpretations.)	36.98	135.500	0.731	0.931				
	13.Content and illustrations of university's WeChat official account you can easily read and understand, such as curriculum or admission information, etc.)	6.51	5.815	0.757	0.739				

Table 7 (Continued)

Variables	Items	Scale Mean if item Deleted		Scale Variance if item Deleted		Corrected Item-Total Correlation		Cronbach's Alpha if Item Deleted	
		Deleted	6.61	Deleted	6.283	Deleted	0.644	Deleted	0.846
	14.Content and illustrations of the university's WeChat official account and advertising media are not complicated and do not cause confusion by the use of letters, colors, images, etc.)		6.61		6.283		0.644		0.846
	15.Content and illustrations of university's WeChat official account are easy to understand without complicated interpretations.)		6.61		5.723		0.733		0.761

Source: Author (2023)

Table 8 Service Quality Reliability Test

Variables	Items	Scale Mean if Deleted		Scale Variance if Deleted		Corrected Item-Total Correlation	Cronbach's Alpha if Deleted	
		Deleted	if Item Deleted	Deleted	Item Deleted		Deleted	Item Deleted
Quality of Service	1.The services provided by the university's WeChat official account you use meet your needs.	46.69	206.260	0.677	0.951	0.953		
	2.The university's WeChat official account enables online communication.	46.78	206.853	0.708	0.950			
	3.In case you need additional information, the service staff is well versed in the education and specifications of the university.	46.73	205.203	0.710	0.950			
	4.Classmates, teachers, or experts influence you to use the university's WeChat official account.	46.78	198.693	0.770	0.949			
	5.People around me who have a greater influence on me support my use of the university's WeChat official account.	46.71	206.212	0.679	0.951			
	6.University's WeChat official account discloses information that shows credibility to users, such as education information, university information, contact information, etc.	46.61	202.403	0.755	0.949			
	7.University's WeChat official account has services that meet the individual needs of users.	46.59	205.407	0.679	0.951			

Table 8 (Continued)

Variables	Items	Scale Mean if Item Deleted		Scale Variance if Item Deleted		Corrected Item-Total Correlation		Cronbach's Alpha if Item Deleted	
		Deleted	Deleted	Deleted	Deleted	Deleted	Deleted	Deleted	Deleted
	8.University's WeChat official account can quickly respond to users' requests for information.	46.96	204.918	0.754	0.949				
	9.University's WeChat official account has staff to provide information or respond to questions from users according to standards.	46.63	198.678	0.841	0.947				
	10.You believe that using the services provided by the university's WeChat official account will not pose a threat to personal privacy	46.63	197.318	0.849	0.947				
	11.You feel safe in your University's WeChat official account	46.86	201.001	0.742	0.950				
	12.You think the service functions provided by the university's WeChat official account you use are personalized.	46.59	204.247	0.774	0.949				
	13.University's WeChat official account has employees who give your personal attention.	46.65	207.953	0.609	0.952				
	14.University's WeChat official account has employees operating hours convenient to all its users.	46.67	200.627	0.808	0.948				
	15.The university's WeChat official account has your best interest information, which you needed.	46.96	206.078	0.730	0.950				

Source: Author (2023)

Table 9 Satisfaction Reliability Test

Variables	Items	Scale Mean		Scale Variance		Corrected Item-Total Correlation	Cronbach's α	
		if Item Deleted	if Item Deleted	if Item Deleted	if Item Deleted		Alpha if Item Deleted	Cronbach's α Deleted
Satisfaction	1.You are generally satisfied with the university's WeChat official account mini program.	13.39	19.123	0.664	0.855			
	2.The experience of using the university's WeChat official account has met your expectations	13.49	19.135	0.721	0.842			
	3.You are willing to give a high evaluation to the university's WeChat official account.	13.43	17.490	0.730	0.840		0.873	
	4.You are satisfied with the university's WeChat official account that you currently use.	13.27	18.563	0.730	0.839			
	5.You think it is wise to choose the currently commonly used university's WeChat official account	13.47	20.054	0.669	0.854			

Source: Author (2023)

Data Collection

The researcher utilized a questionnaire for data collection through online distribution, disseminating surveys via various online channels. The initial section of the questionnaire served as a screening mechanism to identify individuals who had used the WeChat application.

Data Preparation and Data Analysis

Data Preparation

This section delineates the foundational steps in the intricate process of data processing. Divided into two sequential stages, these steps are pivotal in ensuring the reliability and validity of the research outcomes.

1) Completeness Check and Coding

The initial phase entails a meticulous scrutiny to verify the completeness of the questionnaire. Concurrently, a systematic coding system is applied to facilitate efficient computerized data processing.

2) Recording and Analysis

Following the completion of the completeness check and coding, the coded data are meticulously recorded and subjected to thorough analysis. This rigorous examination lays the groundwork for extracting meaningful insights and informs subsequent stages of advanced data processing.

Data Analysis

Data analysis can be classified into two types: descriptive analysis and inferential analysis.

1. Descriptive Statistic

In the context of descriptive data analysis, percentages play a pivotal role in unveiling the characteristics of the sample group. This section employs percentages to comprehensively portray and elucidate the distinctive features of the research participants, as follows;

1.1 Background Information of Respondents

This section comprises questions related to the demographic characteristics of university students, including gender, age, education level, and student status. The analysis will involve the utilization of descriptive statistics, and the findings will be presented in terms of frequency, and percentages.

1.2 System quality factors (adaptability, availability, reliability, response time, and usability) impacting user satisfaction with WeChat Official Account

applications among university students in Xi'an City, Shaanxi Province, China. The data were analyzed using the mean and standard deviation.

1.3 Information quality factors (relevance, completeness, accuracy of information, timeliness, ease of understanding impacting user satisfaction with WeChat Official Account applications among university students in Xi'an City, Shaanxi Province, China. The data were analyzed using the mean and standard deviation.

1.4 Service quality factors (tangible, reliability, responsiveness, assurance, empathy) impacting user satisfaction with WeChat Official Account applications among university students in Xi'an City, Shaanxi Province, China. The data were analyzed using the mean and standard deviation.

1.5 Respondents' Opinions on satisfaction with using the WeChat official account application among university students in Xi'an City, Shaanxi Province, China. Descriptive analysis statistics, including the Mean and Standard Deviation, were utilized for data analysis.

2. Inferential Statistics

This section involves the examination of sample data and the testing of hypotheses, as outlined below:

2.1 System quality factors (adaptability, availability, reliability, response time, and usability) impacting user satisfaction with WeChat official account applications among university students in Xi'an City, Shaanxi Province, China. Hypotheses will be examined through multiple regression analysis.

2.2 Information quality factors (relevance, completeness, accuracy of information, timeliness, ease of understanding impacting user satisfaction with WeChat Official Account applications among university students in Xi'an City, Shaanxi Province, China. Hypotheses will be examined through multiple regression analysis.

2.3 Service quality factors (tangible, reliability, responsiveness, assurance, empathy) impacting user satisfaction with WeChat Official Account applications among university students in Xi'an City, Shaanxi Province, China. Hypotheses will be examined through multiple regression analysis.

2.4 Multiple Regression Analysis is conducted to explore the relationships between dependent variables and one or more independent variables. This statistical method is employed to test hypotheses and can be represented as a linear equation. The raw score format is presented as follows:

$$\hat{Y} = b_0 + b_1X_1 + b_2X_2 + \dots + b_kX_k$$

When;

\hat{Y} = Predictive score of dependent variable Y

b_0 = Fixed effects of the prediction equation in raw score format

- $b_1 b_k$ = Score weights or regression coefficients of the variables
 $x_1 X_k$ = Independent variable score 1 to k
 k = number of independent variables

Research Duration

Table 10 Research Duration

No.	Task	Start Date	End Date
1	Finish Ch1-Ch3	2023. May 05	2023, June30
2	Defense Ch1-Ch3	2023, August 20	2023, September 05
3	Questionnaire first draft	2023, September 6	2023, September7
4	Pretesting (Data coding and analysis)	2023, September 8	2023, September 9
5	Modify the questionnaire	2023, September 10	2023, September 11
6	Data Collection	2023, September 12	2023, September 20
7	Data Coding	2023, September 21	2023, September 23
8	Data analysis	2023, September 24	2023, September 30
9	Paper writing	2023, October 1	2023, October 7
10	Independent Study review	2023, October 8	2023, October 15

Research Budgeting

Table 11 Research Budgeting

No.	Name	Purpose	Budget (Rmb)
1	Book Materials Fee	Cost of purchasing books, subscribing to relevant newspapers, magazines, archives, documents and other materials, and collecting information;	2000
2	Questionnaire	Use questionnaire star to distribute questionnaires and reward participants	1000
3	Research Travel Expenses	Expenses for outings for study tours, inspections, etc.;	500
4	Printing Fee	Paper copy fee	500
Total			4000

CHAPTER IV RESULTS

In this study, the researcher analyzed the factors influencing satisfaction with WeChat Official account applications among university students to precisely determine the impact of various factors on satisfaction. The collected questionnaires were processed using the SPSS for Windows statistical package, with the presentation and interpretation of the data analysis results outlined in this research. The findings have been analyzed and presented in the form of an explanatory table, organized into six sections for clarity:

1. Analysis of background information of respondents
 2. Analysis of system quality factors, including adaptability, availability, reliability, response time, and usability
 3. Analysis of information quality factors, including relevance, completeness, accuracy of information, timeliness, and ease of understanding
 4. Analysis of service quality factors, including tangible, reliability, responsiveness, assurance, and empathy
 5. Analysis of respondents' opinions on satisfaction with using the WeChat official account application among university students
 6. Results of Data Analysis for Hypothesis Testing:
 - H1: System quality has an influence on satisfaction with the WeChat official account application among Xi'an City, Shaanxi Province University students in China.
 - H2: Information quality has an influence on satisfaction with the WeChat official account application among Xi'an City, Shaanxi Province University students in China.
 - H3: Service quality has an influence on satisfaction with the WeChat official account application among Xi'an City, Shaanxi Province University students in China.
- The study results are detailed as follows:

Analysis of background information of respondents

The total number of respondents to the questionnaire was 400 people who had accessed the official WeChat account of the university beforehand. The researcher collected data through the questionnaire and analyzed the data of the sample group according to the statistical principles as shown in Table 12-15.

Table 12 Frequency statistics for demographic characteristics classified by gender

Gender	Frequency	Percentage (%)
Male	218	54.5
Female	182	45.5
Total	400	100

Table 12 showed that majority of the respondents were of male gender with 218 samples (54.50%) followed by females with 182 samples (45.50 %).

Table 13 Frequency statistics for demographic characteristics classified by age

Age	Frequency	Percentage (%)
Under 18 Years Old	82	20.5
18 Years Old-22 Years Old	188	47
Over 22 Years Old	130	32.5
Total	400	100

Table 13 showed that majority of the respondents were between 18-22 years old with 188 samples (47%), followed by 130 samples (32.50 %) who were over 22 years old, and the smallest number was 82 samples (20.5 %) who were under 18 years old.

Table 14 Frequency statistics for demographic characteristics classified by education level

Education Level	Frequency	Percentage (%)
Diploma	121	30.25
Bachelor degree	279	69.75
Total	400	100

Table 14 shows that majority of the respondents were Bachelor degree 279 samples (69.75%) followed by Diploma 121 samples (30.25%).

Table 15 Frequency statistics for demographic characteristics classified by student's major category

Student's Major Category	Frequency	Percentage (%)
Economics and Management Majors	38	9.5
Information Science Majors	29	7.25
Urban Construction Majors	19	4.75
New Media Majors	9	2.25
International Education Majors	8	2
Agricultural Majors	26	6.5
Biology Major	38	9.5
Chemistry Major	51	12.75
Physics Major	21	5.25
Mathematics Major	56	14
Environmental Majors	19	4.75
Medical Majors	30	7.5
Humanities Major	56	14
Total	400	100

Table 15 showed that majority of the respondents were Mathematics major and Humanities major were both 56 samples (14%), followed by Chemistry major was 51 samples (12.75%), then Biology major was 38 samples (9.5%), Medical majors 30 was samples (7.5%), Information Science majors was 29 samples (7.25%), Agricultural majors was 26 samples (6.5%), Physics major 21 was samples (5.25%), Urban construction majors was 19 samples (4.75%), Environmental majors was 19 samples (4.75%), New Media majors was 9 samples (2.25%), International Education majors was 8 samples (2%).

**Analysis of system quality factors, including adaptability,
availability, reliability, response time, and usability**

The results of the data analysis of the system quality factors affecting satisfaction with the WeChat application were classified into five dimensions:

adaptability, usability, reliability, response time, and availability. These dimensions are presented below in the form of means and standard deviations as follows:

Table 16 summarizes the overall factors of system quality that influence satisfaction with the use of the WeChat official account application

System Quality Factor	Mean	S.D.	Definition of Level
Adaptability	2.71	1.14	Not sure
Availability	2.07	1.15	Not sure
Reliability	2.10	1.22	Not sure
Response time	2.08	1.23	Not sure
Usability	2.10	1.22	Not sure
Total	2.22	1.13	Not sure

According to Table 16, this result explains the impact of system quality on the satisfaction of WeChat official account (Mean=2.22). In considering the impact of various dimensions of system quality on the satisfaction of WeChat official account, it is found that users disagree with the statement the impact of reliability on satisfaction (Mean=2.10), followed by usability (Mean=2.10), response time (Mean=2.08), availability (Mean=2.07), and users are disagree with the statement about adaptability (Mean=2.71).

Table 17 Mean and standard deviation of adaptability that affects the satisfaction toward WeChat official account application

System quality	Mean	S.D.	Definition of Level
1. Adaptability			
1.1 The university's WeChat official account has updated its security as appropriate.	4.08	0.74	Agree
1.2 Improving the university's WeChat official account does not affect the use of the application.	1.93	0.70	Not sure
1.3 The adaptability of the university's WeChat official account, such as operational stability or maintaining an account, will not affect the user's confidence.	2.12	1.14	Do not agree
Total	2.71	0.86	Do not agree

According to Table 17, the overall result shows that the user is somewhat agree with the statement (Mean=2.71). Specifically, it is found that the user highly agree with the statement the university's WeChat official account has updated its security as appropriate (Mean=4.08), somewhat disagree with the statement improving the university's WeChat official account does not affect the use of the application (Mean=1.93), and the adaptability of the university's WeChat official account, such as operational stability or maintaining an account, will not affect the user's confidence (Mean=2.12).

Table 18 Mean and standard deviation of availability that Affect the satisfaction toward WeChat official account application

System quality	Mean	S.D.	Definition of Level
2. Availability			
2.1 The university's WeChat official account system meets your needs well.	2.10	1.14	Do not agree
2.2 The university's WeChat official account system is available all the time.	2.04	1.12	Do not agree
2.3 The university's WeChat official account system is stable; for example, while you are using the connection, it will not be disconnected, etc.	2.08	1.21	Do not agree
Total	2.07	1.15	Do not agree

According to Table 18, the results show that the availability of the system weight of the user somewhat disagree with the statement WeChat official account has an impact on the satisfaction of the official account (Mean=2.07). Specifically, it is found that user somewhat disagree with the statement the university's WeChat official account system meets your needs well (Mean=2.10), followed by user somewhat disagree with the statement the university's WeChat official account system is available all the time (Mean=2.04), and user somewhat disagree with the statement the university's WeChat official account system is stable; For example, while you are using the connection, it will not be disconnected, etc. (Mean=2.08).

Table 19 Mean and standard deviation of reliability that Affect the satisfaction toward WeChat official account application

System quality	Mean	S.D.	Definition of Level
3. Reliability			
3.1 The platform of the university's WeChat official account is safe and reliable.	2.10	1.24	Do not agree
3.2 I prefer the university's WeChat official account system to the university home page system	2.07	1.20	Do not agree
3.3 I believe that the university's WeChat official account system is just as dependable and effective as its website system.	2.14	1.22	Do not agree
Total	2.10	1.22	Do not agree

According to Table19, the results show that the reliability in the system quality of the user somewhat disagree with the statement has an impact on the satisfaction of WeChat official account (Mean=2.10). Specifically, the user somewhat disagree with the statement the platform of university's WeChat official account is safe and reliable (Mean=2.10), followed by users do not prefer to the university's WeChat official account system than the university home page system (Mean=2.07), Users do not believe that the university's WeChat official account system is just as dependable and effective as its website system (Mean=2.14).

Table 20 Mean and standard deviation of response time that affects the satisfaction toward WeChat official account application

System quality	Mean	S.D.	Definition of Level
4. Response Time			
4.1 The university's WeChat official account system has always been responsive and quick to use.	2.09	1.21	Do not agree
4.2 The university's WeChat official account system can always be quickly connected to various functions.	2.12	1.24	Do not agree
4.3 The university's WeChat official account system responds quickly to connections to the website.	2.02	1.23	Do not agree
Total	2.08	1.23	Do not agree

According to Table 20, the user's somewhat disagree with the statement system quality response time has an impact on WeChat official account satisfaction (Mean=2.08). Specifically, it is found that the user does not agree the university's WeChat official account system has always been responsive and quick to use (Mean=2.09), followed by users somewhat disagree with the statement the university's WeChat official account system can always be always quickly connected to various functions (Mean=2.12), users somewhat disagree with the statement the university's WeChat official account system responds quickly to connections to the website (Mean=2.02).

Table 21 Mean and standard deviation of usability that affect the satisfaction toward WeChat official account application

System quality	Mean	S.D.	Definition of Level
5. Usability			
5.1 The interface of the university's WeChat official account is concise and clear, and the navigation is easy to use	2.08	1.24	Do not agree
5.2 The university's WeChat official account always has a modern, attractive design such as a graphical user interface, theme color scheme, etc.	2.10	1.18	Do not agree
5.3 The university's WeChat official account has a user-friendly format. Always easy to read, such as clear text, a font size that is easy to read, patterns and colors that do not confuse, etc	2.12	1.24	Do not agree
Total	2.10	1.22	Do not agree

According to Table 21, the results show that the user somewhat disagree with the statement system quality Usability has an impact on the satisfaction of WeChat official account (Mean=2.10). Specifically, it is found that the user somewhat disagree with the statement the interface of the university's WeChat official account is concise and clear, and the navigation is easy to use (Mean=2.08). Users somewhat disagree with the statement the university's WeChat official account always have a modern, attractive design such as a graphical user interface, theme color scheme, etc (Mean=2.10). Users somewhat disagree with the statement the university's WeChat official account has a user-friendly format. Always easy to read, such as clear text, a font size that is easy to read, patterns and colors that do not cause confusion, etc (Mean=2.12).

**Analysis of information quality factors, including relevance,
completeness, accuracy of information, timeliness,
and ease of understanding**

The results of the analysis of data on factors of information quality affecting satisfaction with the use of the WeChat official account application were divided into 5 aspects relevance, completeness, accuracy of information, timeliness, and ease of understanding. These dimensions are presented below in the form of means and standard deviations as follows:

Table 22 summarizes the overall factors of information quality that influence satisfaction with the use of the WeChat official account application

Information Quality	Mean	S.D.	Definition of Level
1. Completeness	2.09	1.21	Do not agree
2. Relevance	2.08	1.22	Do not agree
3. Accuracy of information	2.06	1.21	Do not agree
4. Timeliness	2.05	1.21	Do not agree
5. Ease of Understanding	2.13	1.25	Do not agree
Total	2.08	1.13	Do not agree

According to Table22, the weight of user's somewhat disagree with the statement information affects the satisfaction of WeChat official account (Mean=2.08). Specifically, it is found that user D=somewhat disagree with the statement information quality completeness affects the satisfaction (Mean=2.08), followed by advantage (Mean=2.09), accuracy of information (Mean=2.06),timelines (Mean=2.05), ease of Understanding (Mean=2.13).

Table 23 Mean and standard deviation of relevance that affect the satisfaction toward WeChat official account application

Information Quality	Mean	S.D.	Definition of Level
1. Relevance			
1.1 The information provided by the university's WeChat official account is comprehensive, clear, and complete. has a wealth of sections such as library, curriculum recommendations, admission, digital resources, etc.	2.15	1.24	Do not agree
1.2 The information provided by the university's WeChat official account is comprehensive, clear, and complete.	2.05	1.21	Do not agree
1.3 The university's WeChat official account can provide the information about the university education you need.	2.07	1.18	Do not agree
Total	2.09	1.21	Do not agree

According to Table 23, the overall result of the relevance of information quality is somewhat disagree with the statement (Mean=2.09). Specifically, it was found that the user did not agree the information provided by university's WeChat official account is comprehensive, clear, and complete has a wealth of sections such as library, current recommendations, admission, digital resources, etc. (Mean=2.15), followed by user somewhat disagree with the statement the information provided by university's WeChat official account is comprehensive, clear, and complete (Mean=2.05), user somewhat disagree with the statement.

University's WeChat official account can provide the information about university education they need (Mean=2.07).

Table 24 Mean and standard deviation of completeness that affect the satisfaction toward WeChat official account application

Information Quality	Mean	S.D.	Definition of Level
2. Completeness			
2.1 The information content provided by the university's WeChat official account is rich and comprehensive.	2.11	1.26	Do not agree
2.2 The university's WeChat official account provides information in a variety of expressions (such as videos, pictures, audio, text, etc.	2.10	1.23	Do not agree
2.3 The information on the university's WeChat official account is highly reliable and of high quality.	2.04	1.17	Do not agree
Total	2.08	1.22	Do not agree

According to Table 24 shows the impact of user somewhat disagree with the statement on the information content provided by the university's WeChat official account, which is rich and comprehensive (Mean=2.08). Followed by user somewhat disagree with the statement The university's WeChat official account provides information in a variety of expressions (such as videos, pictures, audio, text, etc. (Mean=2.10), user somewhat disagree with the statement the information on the university's WeChat official account is highly relevant and of high quality (Mean=2.04).

Table 25 Mean and standard deviation of the accuracy of the information that affects the satisfaction toward WeChat official account application

Information Quality	Mean	S.D.	Definition of Level
3. Accuracy of information			
3.1 The university's WeChat official account can push information timely and accurately.	2.07	1.20	Do not agree
3.2 The university's WeChat official account mentions when it was last updated.	2.07	1.20	Do not agree
3.3 The university's WeChat official account provides timestamps for all information posted and any time-sensitive information on the university's WeChat official account mentions the date of the last update	2.06	1.22	Do not agree
Total	2.06	1.21	Do not agree

Accounting to Table 25 shows the impact of user somewhat disagree with the statement on the accuracy of information on WeChat official account satisfaction (Mean=2.06). Specifically, it is found that user somewhat disagree with the statement 3.1.The university's WeChat official account can push information timely and accurately (Mean=2.07), followed by user somewhat disagree with the statement the university's WeChat official account clearly comments when it was last updated (Mean=2.07), User somewhat disagree with the statement the university's WeChat official account provides timestamp for all information posted and any time sensitive information on the university's WeChat official account clear elements date of last update (Mean=2.06).

Table 26 Mean and standard deviation of timeliness that affects the satisfaction toward WeChat official account application

Information Quality	Mean	S.D.	Definition of Level
4. Timeliness			
4.1 Content and illustrations of the university's WeChat official account you can easily read and understand, such as curriculum or admission information, etc.	2.07	1.24	Do not agree
4.2 Content and illustrations of the university's WeChat official account and advertising media are not complicated and are not confused by the use of letters, colors, images, etc.	2.04	1.19	Do not agree
4.3 Content and illustrations of the university's WeChat official account are easy to understand without complicated interpretations.	2.06	1.19	Do not agree
Total	2.06	1.13	Do not agree

According to Table 26 shows the impact of user somewhat disagree with the statement timelines on WeChat official account satisfaction (Mean=2.06). Specifically, it is found that user somewhat disagree with the statement Content and illustrations of university's WeChat official account you can easily read and understand, such as current or administration information, etc (Mean=2.07). Followed by user somewhat disagree with the statement content and illustrations of the university's WeChat official account and advertising media are not replicated and do not cause fusion by the use of letters, colors, images, etc. (Mean=2.04), user somewhat disagree with the statement content and illustrations of the university's WeChat official account are easy to understand without replicated interpretation (Mean=2.06).

Table 27 Mean and standard deviation of ease of understanding that affects the satisfaction toward WeChat official account application

Information Quality	Mean	S.D.	Definition of Level
5. Ease of Understanding			
5.1 Content and illustrations of the university's WeChat official account you can easily read and understand, such as curriculum or admission information, etc.	2.11	1.23	Do not agree
5.2 Content and illustrations of the university's WeChat official account and advertising media are not complicated and are not confused by the use of letters, colors, images, etc.	2.11	1.23	Do not agree
5.3 Content and illustrations of the university's WeChat official account are easy to understand without complicated interpretations.	2.15	1.29	Do not agree
Total	2.12	1.25	Do not agree

According to Table 27 shows the effect of ease of understanding of user somewhat disagree with the statement information quality on WeChat official account satisfaction (Mean=2.12). Specifically, we found that user somewhat disagree with the statement Content and illustrations of university's WeChat official account you can easily read and understand, such as current or administration information, etc (Mean=2.11), Followed by user somewhat disagree with the statement Content and illustrations of the university's WeChat official account and advertising media are not replicated and do not cause fusion by the use of letters, colors, images, etc. (Mean=2.11), user somewhat disagree with the statement Content and illustrations of the university's WeChat official account are easy to understand without replicated interpretations (Mean=2.15).

Analysis of service quality factors, including tangible, reliability, responsiveness, assurance, and empathy

The results of the data analysis of the service quality factors affecting satisfaction with the WeChat application were classified into five dimensions: tangible, reliability, responsiveness, assurance, and empathy. These dimensions are presented below in the form of means and standard deviations as follows:

Table 28 summarizes the overall factors of service quality that influence satisfaction with the use of the WeChat official account application

Service Quality Factor	Mean	S.D.	Definition of Level
1. Tangible	2.12	1.20	Do not agree
2. Reliability	2.16	1.23	Do not agree
3. Responsiveness	2.10	1.23	Do not agree
4. Assurance	2.07	1.19	Do not agree
5. Empathy	2.15	1.24	Do not agree
Total	2.12	1.23	Do not agree

According to Table 28 shows the overall impact of users' disagreement with the service quality on the satisfaction of WeChat official account (Mean=2.12). Specifically, it is found that the impact of users' somewhat disagree with the statement official account on the satisfaction of WeChat official account (Mean=2.16), the impact of followed by users' somewhat disagree with the statement reliability on the satisfaction of WeChat official account (Mean=2.16), responsiveness (Mean=2.10), assurance (Mean=2.07), and empathy (Mean=2.15).

Table 29 Mean and standard deviation of tangible that affect the satisfaction toward WeChat official account application

Service quality	Mean	S.D.	Definition of Level
1. Tangible			
1.1 The services provided by the university's WeChat official account you use meet your needs.	2.08	1.16	Do not agree
1.2 The university's WeChat official account enables online communication.	2.14	1.17	Do not agree
1.3 In case you need additional information, the service staff is well-versed in the education and specifications of the university.	2.13	1.27	Do not agree
Total	2.11	1.23	Do not agree

According to Table 29 shows the impact of user somewhat disagree with the statement Tangible on WeChat official account satisfaction (Mean=2.11). Specifically, it is found that user somewhat disagree with the statement The services provided by the university's WeChat official account you use meet your needs (Mean=2.08), followed by user somewhat disagree with the statement the university's WeChat official account enables online communication (Mean=2.14), user somewhat disagree with the statement in case they need additional information, the service staff is well versed in the education and specifications of the university (Mean=2.13).

Table 30 Mean and standard deviation of reliability that affect the satisfaction toward WeChat official account application

Service quality	Mean	S.D.	Definition of Level
2. Reliability			
2.1 Classmates, teachers, or experts influence you to use the university's WeChat official account.	2.18	1.23	Do not agree
2.2 People around me who have a greater influence on me support my use of the university's WeChat official account	2.17	1.28	Do not agree
2.3 The university's WeChat official account discloses information that shows credibility to users, such as education information, university information, contact information, etc.	2.12	1.19	Do not agree
Total	2.16	1.21	Do not agree

According to Table 30 shows the overall impression of user somewhat disagree with the statement Reliability on WeChat official account satisfaction (Mean=2.16). Specifically, users somewhat disagree with the statement classmates, teachers, or experts influence them to use the university's WeChat official account (Mean=2.18), followed by users somewhat disagree with the statement people around them who have a greater influence on their support my use of the university's WeChat official account (Mean=2.17), users somewhat disagree with the statement University's WeChat official account displays information that shows credibility to users, such as education information, university information, contact information, etc. (Mean=2.12).

Table 31 Mean and standard deviation of responsibilities affect the satisfaction toward WeChat official account application

Service quality	Mean	S.D.	Definition of Level
3. Responsiveness			
3.1 The university's WeChat official account has services that meet the individual needs of users	2.13	1.23	Do not agree
3.2 The university's WeChat official account can quickly respond to users' requests for information	2.12	1.27	Do not agree
3.3 The university's WeChat official account has staff to provide information or respond to questions from users according to standards.	2.04	1.20	Do not agree
Total	2.09	1.20	Do not agree

According to Table 31 It shows the overall impact of user somewhat disagree with the statement responsiveness on WeChat official account satisfaction (Mean=2.09). Specifically, it was found that users somewhat disagree with the statement University's WeChat official account has services that meet the individual needs of users (Mean=2.13), followed by users somewhat disagree with the statement University's WeChat official account can quickly respond to users' requests for information (Mean=2.12), user somewhat disagree with the statement University's WeChat official account has staff to provide information or response to questions from users according to standards (Mean=2.04).

Table 32 Mean and standard deviation of assurance that affects the satisfaction toward WeChat official account application

Service quality	Mean	S.D.	Definition of Level
4. Assurance			
4.1 You believe that using the services provided by the university's WeChat official account will not pose a threat to personal privacy	2.04	1.15	Do not agree
4.2 You feel safe in your University's WeChat official account	2.09	1.19	Do not agree
4.3 You think the service functions provided by the university's WeChat official account you use are personalized.	2.09	1.22	Do not agree
Total	2.07	1.19	Do not agree

According to Table 32 It shows the overall impact of user somewhat disagree with the statement assurance on WeChat official account satisfaction (Mean=2.07). Specifically, it is found that user somewhat disagree with the statement they believe that using the services provided by the university's WeChat official account will not pose a threat to personal privacy(Mean=2.04),followed by users somewhat disagree with the statement they feel safe in your University's WeChat official account(Mean=2.09),users somewhat disagree with the statement they think the service functions provided by the university's WeChat official account tae use are personalized(Mean=2.09).

Table 33 Mean and standard deviation of empathy that affect the satisfaction toward WeChat official account application

Service quality	Mean	S.D.	Definition of Level
5. Empathy			
5.1 The university's WeChat official account has employees who give your attention.	2.14	1.23	Do not agree
5.2 University's WeChat official account has employees operating hours convenient to all its users.	2.21	1.28	Do not agree
5.3 The university's WeChat official account has your best interest information, which you need.	2.11	1.21	Do not agree
Total	2.15	1.24	Do not agree

According to Table 33 shows the overall impact of user somewhat disagree with the statement Empathy on WeChat official account satisfaction (Mean=2.15). Specifically, it is found that user somewhat disagree with the statement University's WeChat official account has employees who give your personal attention (Mean=2.14), followed by user somewhat disagree with the statement University's WeChat official account has employees operating hours consistent to all its users (Mean=2.14). 21), user somewhat disagree with the statement with the university's WeChat official account has your best interest information, which you need (Mean=2.15)

**Analysis of respondents' opinions on satisfaction with
using the WeChat official account application
among university students**

Table 34 Mean and standard deviation of satisfaction with using the WeChat official account application

Satisfaction with Using the WeChat Official Account Application	Mean	S.D.	Definition of Level
1. You are generally satisfied with the university's WeChat official account mini-program.	2.11	1.19	Do not agree
2. The experience of using the university's WeChat official account has met your expectation	2.13	1.26	Do not agree
3. You are willing to give a high evaluation to the university's WeChat official account.	2.14	1.23	Do not agree
4. You are satisfied with the university's WeChat official account that you currently use.	2.11	1.24	Do not agree
5. Do you think it is wise to choose the currently commonly used university's WeChat official account	2.17	1.24	Do not agree
Total	2.13	1.23	Do not agree

According to Table 34 shows that users are generally dissatisfied with WeChat official account (Mean=2.13). Specifically, users are found are not satisfied with the university's WeChat official account mini program(Mean=2.11),followed by they are not satisfied with the university's WeChat official account mini program(Mean=2.13), they are not willing to give a high evaluation to the university's WeChat official account(Men=2.14),they are not satisfied with the university's WeChat official account that they currently use(Mean=2.11),they are not satisfied to choose the currently commonly used university's WeChat official account(Mean=2.17).

Results of Data Analysis for Hypothesis Testing

1. System quality including adaptability, availability, reliability, response time, and usability influences satisfaction with the WeChat official account application among Xi'an City, Shaanxi Province University students in China.

H0: System quality does not influence satisfaction with the WeChat official account application among Xi'an City, Shaanxi Province University students in China.

H1: System quality influences satisfaction with the WeChat official account application among Xi'an City, Shaanxi Province University students in China.

The statistical methodology chosen for hypothesis testing involved the application of multiple regression analysis, utilizing the Enter technique for the selection of independent variables. A confidence level of 95% was adhered to throughout the analysis. The primary hypothesis (H0) was subjected to rigorous scrutiny, and upon the attainment of a significance level (Sig.) below 0.01, it was unequivocally refuted. Consequently, the secondary hypothesis (H1) emerged as the accepted proposition in the context of the study. Detailed results are meticulously delineated in the subsequent sections, providing a comprehensive elucidation of the statistical outcomes.

Table 35 Presents the variances derived from the Multiple Regression Analysis

Source of Variation	SS	df	MS	F	Sig.
Regression	304.965	4	76.241	406.344	.001 ^e
Residual	74.113	395	0.188		
Total	379.078	399			

**Statistically significant at the 0.01 level.

In Table 35, the multiple regression analysis results for the system quality of the WeChat Official Account Application among university students in Xi'an City, Shaanxi Province, China, reveal a Sig. value of 0.001, indicating statistical significance below the 0.01 threshold. Consequently, the null hypothesis (H0) is rejected, while the secondary hypothesis (H1) is accepted. This signifies that the system quality of the WeChat Official Account Application significantly impacts satisfaction among university students in Xi'an City, Shaanxi Province, China. This outcome aligns with the predetermined assumptions at a statistical significance level of 0.01.

Henceforth, the study utilized multiple regression analysis to scrutinize the impact of the system quality factor on the WeChat Official Account Application among

university students in Xi'an City, Shaanxi Province, China. A comprehensive presentation of the hypothesis testing outcomes is provided in Table 36.

Table 36 Multiple Regression Analysis of System Quality's Influence on User Satisfaction with the WeChat Official Account Application among University Students in Xi'an City, Shaanxi Province, China. (Stepwise Multiple Regression)

System Quality Factor	SE	(B)	t	Sig.
(Constant)	.054		2.253	.025
Usability (X ⁵)	.039	.281	6.937	.001
Response Time (X ⁴)	.038	.256	6.350	.001
Availability (X ²)	.044	.223	5.295	.001
Reliability (X ³)	.041	.223	5.289	.001
R = 0.897		Adjusted R² =0.803		
R² = 0.804		SE =0.433		

**Statistically significant at the 0.01 level.

Based on the findings presented in Table 36, the analysis reveals a positive correlation between the system quality of the WeChat Official Account Application and its various components among university students in Xi'an City, Shaanxi Province, China. Specifically, adaptability (X1), availability (X2), reliability (X3), response time (X4), and usability (X5) all exhibit a significant relationship with the overall system quality (y1), as evidenced by Sig. values of 0.000. This set of variables can collectively predict the overall system quality (y1) with an accuracy of 80.3 percent (Adjusted R2).

To further illustrate these relationships, the researcher has formulated an equation for predicting system quality using raw scores:

$$y^1 = .054 + .281 (X^2) + .256 (X^4) + .223 (X^5) + .223 (X^3)$$

The study's findings can be summarized as follows:

Variables demonstrating a positive predictive influence on the system quality factor, thereby impacting satisfaction with the WeChat Official Account Application service among university students in Xi'an City, Shaanxi Province, China (y1), have achieved statistical significance at the 0.01 level. These variables include adaptability (X1), availability (X2), reliability (X3), response time (X4), and usability (X5), as outlined below:

In terms of the regression coefficient for the system quality factor, specifically usability (X2), it registers at 0.281. This indicates that a one-unit increase in the attention given by university students to the system quality aspect of usability (X5), as reflected in their questionnaire responses, corresponds to a 0.281-unit increase in their satisfaction. In simpler terms, a higher focus on usability correlates with increased satisfaction in using the WeChat Official Account Application service in Xi'an City.

In terms of the regression coefficient for the system quality factor, specifically response time (X4), it registers at .256. This indicates that a one-unit increase in the attention given by university students to the system quality aspect of response time (X4), as reflected in their questionnaire responses, corresponds to a .256-unit increase in their satisfaction. In simpler terms, a higher focus on usability correlates with increased satisfaction in using the WeChat Official Account Application service in Xi'an City.

In terms of the regression coefficient for the system quality factor, specifically availability (X2), it registers at .223. This indicates that a one-unit increase in the attention given by university students to the system quality aspect of availability (X2), as reflected in their questionnaire responses, corresponds to a .223 -unit increase in their satisfaction. In simpler terms, a higher focus on usability correlates with increased satisfaction in using the WeChat Official Account Application service in Xi'an City.

In terms of the regression coefficient for the system quality factor, specifically reliability (X3), it registers at .223. This indicates that a one-unit increase in the attention given by university students to the system quality aspect of reliability (X3), as reflected in their questionnaire responses, corresponds to a .223 -unit increase in their satisfaction. In simpler terms, a higher focus on usability correlates with increased satisfaction in using the WeChat Official Account Application service in Xi'an City.

2. Information quality including relevance, completeness, accuracy of information, timeliness, and ease of understanding influences satisfaction with the WeChat official account application among Xi'an City, Shaanxi Province University students in China.

H0: Information quality does not influence satisfaction with the WeChat official account application among Xi'an City, Shaanxi Province University students in China.

H1: Information quality influences satisfaction with the WeChat official account application among Xi'an City, Shaanxi Province University students in China.

The statistical methodology chosen for hypothesis testing involved the application of multiple regression analysis, utilizing the Enter technique for the selection of independent variables. A confidence level of 99% was adhered to throughout the analysis. The primary hypothesis (H0) was subjected to rigorous scrutiny, and upon the attainment of a significance level (Sig.) below 0.01, it was unequivocally refuted. Consequently, the secondary hypothesis (H1) emerged as the accepted

proposition in the context of the study. Detailed results are meticulously delineated in the subsequent sections, providing a comprehensive elucidation of the statistical outcomes.

Table 37 Multiple Regression Analysis of Information Quality's Influence on User Satisfaction with the WeChat Official Account Application among University Students in Xi'an City, Shaanxi Province, China

Source of Variation	SS	df	MS	F	Sig.
Regression	302.494	4	75.624	390.049	.001
Residual	76.583	395	.194		
Total	379.078	399			

**Statistically significant at the 0.01 level.

In Table 37, the multiple regression analysis results for the information quality of the WeChat Official Account Application among university students in Xi'an City, Shaanxi Province, China, reveal a Sig. value of 0.001, indicating statistical significance below the 0.01 threshold. Consequently, the null hypothesis (H0) is rejected, while the secondary hypothesis (H1) is accepted. This signifies that the information quality of the WeChat Official Account Application significantly impacts satisfaction among university students in Xi'an City, Shaanxi Province, China. This outcome aligns with the predetermined assumptions at a statistical significance level of 0.01.

Henceforth, the study utilized multiple regression analysis to scrutinize the impact of the information quality factor on the WeChat Official Account Application among university students in Xi'an City, Shaanxi Province, China. A comprehensive presentation of the hypothesis testing outcomes is provided in Table 38.

Table 38 Multiple Regression Analysis of Information Quality's Influence on User Satisfaction with the WeChat Official Account Application among University Students in Xi'an City, Shaanxi Province, China

Information Quality Factor	SE	(B)	t	Sig.
(Constant)	.054		3.637	.001
Accuracy (X ³)	.041	.278	6.444	.001
Ease to understand (X ⁵)	.040	.247	5.640	.001
Completeness (X ²)	.041	.242	5.818	.001
Timeliness (X ⁴)	.042	.206	4.723	.001
R = 0.893		Adjusted R² =0.796		
R² = 0.798		SE =0.440		

**Statistically significant at the 0.01 level.

Based on the findings presented in Table 4.27, the analysis reveals a positive correlation between the information quality of the WeChat Official Account Application and its various components among university students in Xi'an City, Shaanxi Province, China. Specifically, Relevance (X1), Completeness (X2), Accuracy of information (X3), Timeliness (X4), and Ease to understand (X5) all exhibit a significant relationship with the overall information quality(y1), as evidenced by Sig. values of 0.000. This set of variables can collectively predict the overall information quality with an accuracy of 79.6 percent (Adjusted R2).

To further illustrate these relationships, the researcher has formulated an equation for predicting system quality using raw scores:

$$y^1 = .054+.278 (X^3) +.247 (X^5) +.242 (X^2) +.206 (X^4)$$

The study's findings can be summarized as follows:

Variables demonstrating a positive predictive influence on the information quality factor, thereby impacting satisfaction with the WeChat Official Account Application service among university students in Xi'an City, Shaanxi Province, China (y1), have achieved statistical significance at the 0.01 level. These variables include relevance (X1), completeness (X2), accuracy of information (X3), timeliness (X4), and ease of understanding (X5), as outlined below:

In terms of the regression coefficient for the information quality factor, specifically the accuracy of information (X3), it registers at 0.278. This indicates that a

one-unit increase in the attention given by university students to the information quality aspect of accuracy of information (X3), as reflected in their questionnaire responses, corresponds to a 0.278 unit increase in their satisfaction. In simpler terms, a higher focus on usability correlates with increased satisfaction in using the WeChat Official Account Application service in Xi'an City.

In terms of the regression coefficient for the information quality factor, specifically ease of understanding (X5), it registers at 0.247. This indicates that a one-unit increase in the attention given by university students to the information quality aspect of ease of understanding (X5), as reflected in their questionnaire responses, corresponds to a 0.247-unit increase in their satisfaction. In simpler terms, a higher focus on usability correlates with increased satisfaction in using the WeChat Official Account Application service in Xi'an City.

In terms of the regression coefficient for the information quality factor, specifically completeness (X2), it registers at 0.242. This indicates that a one-unit increase in the attention given by university students to the information quality aspect of completeness (X2), as reflected in their questionnaire responses, corresponds to a 0.242-unit increase in their satisfaction. In simpler terms, a higher focus on usability correlates with increased satisfaction in using the WeChat Official Account Application service in Xi'an City.

In terms of the regression coefficient for the information quality factor, specifically timeliness (X4), it registers at 0.206. This indicates that a one-unit increase in the attention given by university students to the information quality aspect of timeliness (X4), as reflected in their questionnaire responses, corresponds to a 0.206-unit increase in their satisfaction. In simpler terms, a higher focus on usability correlates with increased satisfaction in using the WeChat Official Account Application service in Xi'an City.

3. Service quality including tangible, reliability, responsiveness, assurance, and empathy influences satisfaction with the WeChat official account application among Xi'an City, Shaanxi Province University students in China.

H0: Service quality does not influence satisfaction with the WeChat official account application among Xi'an City, Shaanxi Province University students in China.

H1: Service quality influences satisfaction with the WeChat official account application among Xi'an City, Shaanxi Province University students in China.

The statistical methodology chosen for hypothesis testing involved the application of multiple regression analysis, utilizing the Enter technique for the selection of independent variables. A confidence level of 99% was adhered to throughout the analysis. The primary hypothesis (H0) was subjected to rigorous scrutiny, and upon the attainment of a significance level (Sig.) below 0.01, it was unequivocally refuted. Consequently, the secondary hypothesis (H1) emerged as the accepted proposition in the context of the study. Detailed results are meticulously delineated

in the subsequent sections, providing a comprehensive elucidation of the statistical outcomes.

Table 39 Multiple Regression Analysis of Service Quality's Influence on User Satisfaction with the WeChat Official Account Application among University Students in Xi'an City, Shaanxi Province, China

Source of Variation	SS	df	MS	F	Sig.
Regression	302.815	5	60.563	312.892	.001
Residual	76.262	394	.194		
Total	379.078	399			

**Statistically significant at the 0.01 level.

In Table 39, the multiple regression analysis results for the service quality of the WeChat Official Account Application among university students in Xi'an City, Shaanxi Province, China, reveal a Sig. value of 0.001, indicating statistical significance below the 0.01 threshold. Consequently, the null hypothesis (H0) is rejected, while the secondary hypothesis (H1) is accepted. This signifies that the service quality of the WeChat Official Account Application significantly impacts satisfaction among university students in Xi'an City, Shaanxi Province, China. This outcome aligns with the predetermined assumptions at a statistical significance level of 0.01.

Henceforth, the study utilized multiple regression analysis to scrutinize the impact of the service factor on the WeChat Official Account Application among university students in Xi'an City, Shaanxi Province, China. A comprehensive presentation of the hypothesis testing outcomes is provided in Table 40.

Table 40 Multiple Regression Analysis of Service Quality's Influence on User Satisfaction with the WeChat Official Account Application among University Students in Xi'an City, Shaanxi Province, China

Service Quality Factor	SE	(B)	t	Sig.
(Constant)	.057		1.059	.290
Assurance (X ⁴)	.041	.216	5.258	.001
Tangible (X ¹)	.040	.221	5.582	.001
Responsiveness (X ³)	.040	.195	4.702	.001
Reliability (X ²)	.037	.187	4.787	.001
Empathy (X ⁵)	.039	.183	4.530	.001
R =0.894		Adjusted R² =0.796		
R² = 0.799		SE =0.4399		

**Statistically significant at the 0.01 level.

Based on the findings presented in Table 40, the analysis reveals a positive correlation between the service quality of the WeChat Official Account Application and its various components among university students in Xi'an City, Shaanxi Province, China. Specifically, tangible (X1), reliability (X2), responsiveness (X3), assurance (X4), and empathy (X5) all exhibit a significant relationship with the overall service quality (y1), as evidenced by Sig. values of 0.000. This set of variables can collectively predict the overall service quality with an accuracy of 79.6 percent (Adjusted R2).

To further illustrate these relationships, the researcher has formulated an equation for predicting system quality using raw scores:

$$y1 = .057+.216 (X4) +.221 (X1) +.195 (X3) +.187 (X2)+ .183(X5)$$

The study's findings can be summarized as follows:

Variables demonstrating a positive predictive influence on the service quality factor, thereby impacting satisfaction with the WeChat Official Account Application service among university students in Xi'an City, Shaanxi Province, China (y1), have achieved statistical significance at the 0.01 level. These variables include tangible (X1), reliability (X2), responsiveness (X3), assurance (X4), and empathy (X5), as outlined below:

In terms of the regression coefficient for the service quality factor, specifically assurance (X4), it registers at 0.216. This indicates that a one-unit increase in the

attention given by university students to the information quality aspect of assurance (X4), as reflected in their questionnaire responses, corresponds to a 0.216-unit increase in their satisfaction. In simpler terms, a higher focus on usability correlates with increased satisfaction in using the WeChat Official Account Application service in Xi'an City.

In terms of the regression coefficient for the service quality factor, specifically tangible (X1), it registers at 0.221. This indicates that a one-unit increase in the attention given by university students to the service quality aspect of reliability (X1), as reflected in their questionnaire responses, corresponds to a 0.221-unit increase in their satisfaction. In simpler terms, a higher focus on usability correlates with increased satisfaction in using the WeChat Official Account Application service in Xi'an City.

In terms of the regression coefficient for the service quality factor, specifically responsiveness (X3), it registers at 0.195. This indicates that a one-unit increase in the attention given by university students to the information quality aspect of accuracy of responsiveness (X3), as reflected in their questionnaire responses, corresponds to a 0.195-unit increase in their satisfaction. In simpler terms, a higher focus on usability correlates with increased satisfaction in using the WeChat Official Account Application service in Xi'an City.

In terms of the regression coefficient for the service quality factor, specifically reliability (X2), it registers at 0.187. This indicates that a one-unit increase in the attention given by university students to the information quality aspect of reliability (X2), as reflected in their questionnaire responses, corresponds to a 0.187-unit increase in their satisfaction. In simpler terms, a higher focus on usability correlates with increased satisfaction in using the WeChat Official Account Application service in Xi'an City.

In terms of the regression coefficient for the information quality factor, specifically empathy (X5), it registers at 0.183. This indicates that a one-unit increase in the attention given by university students to the information quality aspect of ease of empathy (X5), as reflected in their questionnaire responses, corresponds to a 0.183-unit increase in their satisfaction. In simpler terms, a higher focus on usability correlates with increased satisfaction in using the WeChat Official Account Application service in Xi'an City.

Summary of hypothesis test results

Table 41 Displays the outcomes of hypothesis testing related to system quality

System Quality				
Satisfaction of university student	1. Adaptability	2. Availability	4. Response Time	5. Usability

Table 42 Displays the outcomes of hypothesis testing related to information quality

Information Quality				
Satisfaction of university student	2. Completeness	3. Accuracy of information	4. Timeliness	5. Ease of understanding
√	√	√	√	√

Table 43 Displays the outcomes of hypothesis testing related to service quality

Service Quality					
Satisfaction of university student	1. Tangible	2. Reliability	3. Responsiveness	4. Assurance	5. Empathy
√	√	√	√	√	√

Note: √ indicates consistency with the established assumptions.

CHAPTER V

CONCLUSIONS, DISCUSSION, AND RECOMMENDATIONS

The contemporary digital milieu has borne witness to an unprecedented surge in global interconnectivity, with WeChat emerging as a vanguard of technological evolution. This platform, catering to a staggering 1.3 billion users globally, has become an indispensable facet of daily life, particularly asserting its dominance within China, where it commands a substantial user base of 811 million individuals, constituting an impressive 57.9% of the nation's total populace. Within the confines of this research endeavor titled "An Exploration of Factors Influencing University Students' Satisfaction with WeChat Services in Xi'an City, Shaanxi Province, China," we navigate the intricate terrain of WeChat's expansive functionalities and discern its significance in addressing the discerning needs of university students. Our exploration transcends numerical metrics, delving into the intricacies of WeChat's role in the educational sphere, specifically within the dynamic academic landscape of Xi'an. Within this chapter, we distill the quintessence of our empirical findings, offering a nuanced comprehension of the multilayered determinants influencing student satisfaction. Moreover, we engage in a scholarly discourse that not only encapsulates the present landscape but also envisions prospective trajectories for WeChat's role in shaping the educational experience, thereby contributing to the scholarly dialogue on digital platforms within the academic domain. In presenting the outcomes of the investigation and the ensuing recommendations, the following encapsulation emerges:

1. Conclusions
 - 1.1 Background information of respondents
 - 1.2 Factor of system quality that affects university students' satisfaction with WeChat official account applications
 - 1.3 Factor of information quality that affects university students' satisfaction with WeChat official account applications
 - 1.4 Factor of service quality that affects university students' satisfaction with WeChat official account applications
 - 1.5 Satisfaction with using the WeChat official account application among university students
2. Discussions
3. Research Significance
 - 3.1 Theoretical Significance
 - 3.2 Practical Significance
4. Limitations
5. Recommendations and Future Research

Conclusions

Background information of respondents

Before delving into the factors influencing university students' satisfaction with WeChat services, it is crucial to understand the demographic composition of the respondents in this study. The analysis of background information, including gender distribution, age demographics, education levels, and students' major categories, sheds light on the diverse characteristics of the participants. This foundational understanding provides context for interpreting the subsequent findings related to WeChat usage and satisfaction among university students in Xi'an city, Shaanxi Province, China.

Gender Distribution: The respondents, totaling 400, exhibited a gender distribution where 54.5% identified as male and 45.5% as female. This data illustrates a slight male majority among individuals who accessed the official WeChat account of the university.

Age Distribution: Analysis of age distribution revealed that the majority of respondents fell between 18 and 22 years old, constituting 47% of the sample. Those over 22 years old comprised 32.5%, while respondents under 18 years old were the smallest group at 20.5%. This suggests a predominant representation of university students within the 18-22 age range.

Education Level: The educational background of respondents indicated a clear majority with a Bachelor's degree, accounting for 69.75% of the sample. Meanwhile, those with a Diploma constituted 30.25% of the respondents, emphasizing a higher prevalence of individuals with undergraduate education.

Student's Major Category: Examining the distribution by major category, Mathematics and Humanities emerged as the leading majors, each representing 14% of the respondents. Chemistry followed closely with 12.75%, while New Media and International Education majors were the least represented at 2.25% and 2%, respectively. This provides insights into the diverse academic backgrounds of respondents, with Mathematics and Humanities majors being the most prevalent.

Factor of system quality that affects university students' satisfaction with WeChat official account applications

The analysis of system quality factors, including adaptability, availability, reliability, response time, and usability, reveals a mean score of 2.22, indicating uncertainty or disagreement among users about their impact on satisfaction. Users express dissatisfaction with reliability (2.10), usability (2.10), response time (2.08), availability (2.07), and adaptability (2.71). These findings highlight specific areas for improvement in the WeChat official account application. Strategies and recommendations will be discussed in the following chapter to address these challenges and enhance overall user satisfaction.

In the study, a positive correlation exists between the WeChat Official Account Application's system quality and its components among university students in Xi'an City, Shaanxi Province, China. These components collectively predict system quality with 80.3% accuracy. The multiple regression equation can be written as follows:

$$\text{System quality} = 0.054 + .281 (\text{usability}) + 0.256 (\text{Response Time}) + 0.223 (\text{Availability}) + 0.223 (\text{Reliability})$$

Factor of information quality that affects university students' satisfaction with WeChat official account applications

The analysis of information quality factors, including relevance, completeness, accuracy, timeliness, and ease of understanding, indicates an overall mean score of 2.08. This suggests user disagreement or uncertainty about the impact of these factors on satisfaction. Users expressed particular dissatisfaction with completeness (Mean=2.09), relevance (Mean=2.08), accuracy (Mean=2.06), timeliness (Mean=2.05), and ease of understanding (Mean=2.13). Specific points of contention include the lack of richness and variety in information content, challenges in comprehending content and illustrations, and concerns about the timeliness and accuracy of information push. These findings underscore the need for improvements in these dimensions to align with user expectations and enhance satisfaction with the WeChat official account application.

The study reveals a positive correlation between the information quality of the WeChat Official Account Application and its components among university students in Xi'an City, Shaanxi Province, China. These components collectively predict information quality with 79.6% accuracy. The prediction equation, excluding the table, is:

$$\text{Information quality} = 0.054 + .278 (\text{Accuracy}) + .247 (\text{Ease to understand}) + .242 (\text{Completeness}) + .206 (\text{Timeliness})$$

Factor of service quality that affects university students' satisfaction with WeChat official account applications

The analysis of service quality factors, including tangible, reliability, responsiveness, assurance, and empathy, reveals an overall mean score of 2.12, indicating user disagreement or uncertainty about the impact of these factors on satisfaction with the WeChat official account application. Users expressed dissatisfaction with tangible (Mean=2.11), reliability (Mean=2.16), responsiveness

(Mean=2.09), assurance (Mean=2.07), and empathy (Mean=2.15). Notable points of concern include the perceived lack of meeting individual needs, quick response to user requests, assurance of privacy, and empathetic interactions. Improvements in these dimensions are essential to align with user expectations and enhance satisfaction with the WeChat official account application.

The analysis of WeChat Official Account Application's service quality components among university students in Xi'an City, Shaanxi Province, China, reveals a positive correlation. Tangible (X1), Reliability (X2), Responsiveness (X3), Assurance (X4), and Empathy (X5) all significantly contribute to the overall service quality (y1), with a predictive accuracy of 79.6%. The predictive equation, excluding the table, is:

$$\text{Service quality} = .057 + .216 (\text{Assurance}) + .221 (\text{Tangible}) + .195 \\ (\text{Responsiveness}) + .187 (\text{Reliability}) + .183 (\text{Empathy})$$

Satisfaction with using the WeChat official account application among university students

The analysis of respondents' opinions on satisfaction with the WeChat official account application among university students reveals an overall dissatisfaction with a mean score of 2.13. Users expressed discontent with various aspects, including their general satisfaction with the university's WeChat official account mini-program (Mean=2.11), the experience meeting their expectations (Mean=2.13), reluctance to give a high evaluation (Mean=2.14), dissatisfaction with the current usage of the WeChat official account (Mean=2.11), and reservations about choosing the currently commonly used university's WeChat official account (Mean=2.17). These findings highlight areas that require attention and improvement to enhance user satisfaction with the WeChat official account application.

Discussions

The findings derived from the multiple regression analysis identified key factors influencing user satisfaction with the WeChat official account application among university students. The examination encompassed system quality, information quality, and service quality. The analysis revealed a discernible relationship between the conceptual model and the empirical data, which can be succinctly summarized as follows:

System quality and satisfaction of WeChat official account application

Through the meticulous statistical examination of the research hypotheses, this investigation establishes a congruence with the findings of Roszalina bt. Abdul Rahim and Fahmi Zaidi Abdul Razak (2021) regarding the influence of system quality on user satisfaction with the WeChat official account application among university students. In their study on factors contributing to user satisfaction on e-campus, they reveal a positive correlation between system quality and user satisfaction. This research accentuates the critical role of system quality as an indispensable component for ensuring the sustainability of a novel system. Within this context, consumers manifest a heightened concern for system efficiency, and the adoption of a high-quality system significantly facilitates consumers in achieving outcomes of elevated production quality.

Information quality and satisfaction of WeChat official account application

Through the meticulous statistical examination of the research hypotheses, this investigation establishes a congruence with the findings of Patma et al. (2021) that information quality can have an effect on customer satisfaction. Studies on the relationship between information quality and customer satisfaction, among others (Akbar, 2017) which suggests that information quality will have an effect on customer satisfaction.

Foremost, the importance of comprehensive information content takes center stage in elevating user satisfaction. Within the university-centric WeChat official account, the need for exhaustive and pertinent information, covering academic offerings, event updates, and extracurricular activities, becomes paramount. User satisfaction is intricately linked to the platform's role as a one-stop repository catering to the diverse informational needs inherent in the university experience. Additionally, the integration of interactive features within the WeChat official account emerges as a noteworthy aspect. Features like quizzes, polls, and live Q&A sessions not only augment user engagement but also contribute substantially to an enriched user experience. This interactive dimension introduces dynamism to information consumption, potentially fostering a sense of connection and active involvement among users.

Furthermore, the aspect of personalization surfaces as a key determinant of user satisfaction. The WeChat official account's capability to customize information delivery based on individual preferences, academic pursuits, or extracurricular interests significantly amplifies the user experience. Personalization signifies a keen responsiveness to user needs, cultivating a robust connection between the user and the platform. Drawing from the work of Dannita Normelindasari and Achmad Solichin (2019), it is evident that satisfaction is intricately linked not only to information quality but also to system quality. This reinforces the interconnected nature of various factors influencing user satisfaction, underlining the need for a holistic approach in enhancing the overall user experience.

Service quality and satisfaction of WeChat official account application

Through a meticulous statistical examination of research hypotheses, this investigation aligns with the conclusions drawn by Pearl M.C. Lin and Wai Ching Wilson Au (2023). Their study reveals that service quality dimensions, specifically system availability, content, privacy, compensation, and responsiveness, had insignificant impacts on users' mobile app satisfaction. Conversely, mobile app service quality demonstrated significant spillover effects on both food satisfaction and repurchase intention.

Synthesizing the outcomes of this research, a conclusive inference can be drawn: service quality significantly influences university student satisfaction. This aligns with the findings of Aryo Bismo, Haryadi Sarjono, and Andika Ferian (2018), whose research indicated a positive and substantial impact of service quality on customer satisfaction. The enhancement of service quality, as suggested by their study, contributes positively to overall customer satisfaction. These congruent findings underscore the pivotal role of service quality in shaping user satisfaction across different contexts.

Research Significance

Theoretical Significance

This study makes a notable contribution to the academic discourse surrounding user satisfaction and mobile applications. It offers invaluable insights into the specific determinants of user satisfaction within a culturally nuanced context. By doing so, it contributes to a deeper comprehension of user behavior and preferences in the realm of mobile technology. The lessons gleaned regarding user satisfaction, quality factors, and mobile app usage possess universal applicability in cross-cultural and global contexts, informing practices, policies, and strategies not only within China but also across diverse regions and industries worldwide.

Practical Significance

These implementation recommendations are designed to directly tackle the identified issues and bring about tangible improvements in WeChat services within educational institutions in Xi'an City, Shaanxi Province, China. By putting these recommendations into action, practical benefits such as enhanced communication channels, streamlined processes, increased user satisfaction, and overall improved service quality can be realized. The goal is to provide actionable strategies that translate into real-world advantages, fostering a more effective and satisfying WeChat experience for students and stakeholders alike.

1. Optimize Online Feedback Mechanism

Implementing an enhanced online feedback mechanism is crucial for improving WeChat official account system quality, information quality, and service quality. This mechanism should facilitate efficient communication between platform managers and

users, providing a seamless channel for users to express their needs and concerns. The optimization process should involve improvements to the existing mechanism and innovative service models, drawing inspiration from successful models in related products.

2. Optimize Transaction Progress Management

Ensure transparency in the progress of system quality, information quality, and service quality enhancements. Make every handling node visible to the public, allowing for real-time feedback from node operators. Timely supplementation of relevant materials and feedback to citizens is essential, fostering a sense of public participation and ultimately enhancing work efficiency.

3. Unify Functional Area Division and Simplify Usage Process

Streamline the functional areas within the WeChat official account, covering announcements, news hotspots, information inquiries, and advice. This step is crucial for users to quickly locate the information they need, saving time and improving overall work efficiency. Simplifying the usage process contributes to a better user experience and enhances the quality of user service.

4. Fully Utilize Information Publishing Capabilities

Leverage the information publishing capabilities of WeChat official accounts to disseminate timely, truthful, and accurate information. Particularly during critical situations like the COVID-19 pandemic, the platform should play a proactive role in releasing relevant information promptly. Additionally, the platform should be vigilant in refuting rumors and preventing the spread of false information that may lead to public panic.

5. Risk Control for Management Backend

Develop effective strategies to enhance the security of the WeChat official account system. Given the vulnerability of internet data products to risks such as hacker attacks and information leakage, prioritize strategic management and control of the platform's security risks. Implement security measures such as watermark encryption of web pages and risk monitoring to safeguard public personal information.

6. Design Characteristic Zone

Improve the service quality of WeChat official accounts by introducing a Design Characteristic Zone. This innovative strategy involves providing more opportunities for public expression and participation. Enabling the public to voice opinions and complaints enhances their sense of social responsibility. Public participation can uncover social issues, fostering a more responsive and socially engaged WeChat official account platform.

Limitations

While this study has provided valuable insights into the factors influencing university students' satisfaction with WeChat services in Xi'an City, Shaanxi Province,

China, it is essential to acknowledge and delineate the limitations inherent in the research design, data collection, and analytical framework.

Sampling Scope

The study's primary limitation lies in its confined sampling scope, focusing exclusively on 63 institutions within Xi'an City. While these institutions collectively represent a substantial student population, the narrow geographic and demographic coverage raises concerns about the generalizability of findings. Student behaviors and satisfaction with WeChat services may be influenced by regional nuances, cultural distinctions, or institutional peculiarities that are not representative of the broader national or international context. Therefore, the study's insights should be interpreted with caution when attempting to apply them to diverse student bodies beyond the specific characteristics of Xi'an City.

Time Constraints

A notable limitation stems from the constrained time frame of the research, spanning five months from June to October 2023. This temporal restriction poses challenges in capturing the dynamic nature of student engagement with WeChat services over an extended period. Short-term fluctuations and seasonality in user behavior may not be fully discerned within this timeframe. Additionally, the rapidly evolving landscape of technology and social media platforms suggests that the study's conclusions may not comprehensively encapsulate emerging trends or shifts in user preferences beyond the specified research period.

Methodological Considerations

An inherent limitation lies in the methodological approach, predominantly relying on self-reported survey data and regression analysis. While these methods offer valuable quantitative insights, they may not capture the full spectrum of complex, nuanced interactions that influence student satisfaction with WeChat. Social desirability bias, where respondents may provide answers they perceive as socially acceptable, could compromise the accuracy of the data. Furthermore, the study's exclusive reliance on quantitative methodologies might overlook qualitative aspects of user experiences that could enrich the overall understanding of the phenomena under investigation.

Platform Evolution

The study's focus on WeChat's status and user satisfaction during the specific research period raises concerns about the dynamism of the platform. WeChat, as a technological entity, undergoes continuous evolution, introducing new features and functionalities that may significantly alter user interactions. The study's static snapshot might not fully capture these ongoing changes, potentially rendering its conclusions less applicable to the current state of WeChat or its future developments. The absence of real-time adaptability in the research design limits the study's ability to provide

insights into how WeChat's evolution could impact user satisfaction beyond the investigated timeframe.

Recommendations

Recommendations for future research

These recommendations for future research aim to encourage scholars and practitioners to explore innovative approaches, technologies, and strategies for enhancing WeChat services in educational institutions. The goal is to contribute to the continual improvement of digital communication channels for students in Xi'an City, Shaanxi Province, China.

1. Advanced Image Recognition Systems and Branding:

Future research should delve deeper into the impact of advanced image recognition systems and dedicated branding departments on the effectiveness of university WeChat public platforms. Investigate how cutting-edge technologies, such as artificial intelligence and machine learning, can be applied to enhance image recognition and branding strategies. Assess the long-term effects on brand perception and user engagement, providing insights into the evolving landscape of digital communication in educational institutions.

2. Innovative Operational Strategies and Content Quality:

Further research is recommended to explore innovative operational strategies for managing WeChat public platforms in educational settings. Investigate successful case studies and best practices in content creation and dissemination. Assess how universities can foster a culture of innovation within their communication teams, promoting originality and engagement. This research could contribute valuable insights into improving operational efficiency and maintaining high content quality.

3. Strategies for Enhanced User Interaction:

Future research should focus on developing effective strategies to overcome challenges related to limited interaction and online activities on official microblogs. Investigate successful examples of universities that have implemented interactive features and community-building initiatives on WeChat. Explore the impact of these strategies on user satisfaction and engagement. This research could provide a roadmap for universities seeking to create vibrant and interactive online communities within their WeChat platforms.

4. Accessibility and Technology Integration:

To address accessibility limitations and technology compatibility, future research should explore advancements in technology integration within educational communication channels. Investigate how universities can leverage emerging technologies to ensure seamless access to information through WeChat. Assess the impact of technology updates on overall system quality and user satisfaction. This

research could guide universities in adopting future-proof technologies for an improved user experience.



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APPENDICS



APPENDIX A

The Questionnaire (English and Chinese Version)

Hello, I am a master's student. I am conducting a survey on "Factors Influencing WeChat Service Satisfaction among College Students in Xi'an City, Shaanxi Province, China." I kindly ask you to take a few minutes to help fill in this questionnaire. This questionnaire is anonymous and all data will only be used for statistical analysis. Please feel free to fill it out. There are no right or wrong question options. Please tick the following questions where you think they are appropriate. Thank you very much for taking up your precious time.

Part 1: Screening Questions

No.1 Are you currently a student at a university in Xi'an city, China?

- 1.1) Yes
- 1.2) No (end of the questionnaire)

No.2 Have you ever used the WeChat application?

- 2.1) Yes
- 2.2) No (end of the questionnaire)

Part 2: Demographic Characteristics

No.3 Gender

- 3.1) Male
- 3.2) Female

No.4 Age

- 4.1) Under 18 Years Old
- 4.2) 18 Years Old-22 Years Old
- 4.3) Over 22 Years Old

No.5 Education Level

- 5.1) Undergraduate education
- 5.2) Junior college education

No.6 Current Majors

- 6.1) Economics and Management majors
- 6.2) Information Science majors
- 6.3) Urban construction majors
- 6.4) New Media Majors

- 6.5) International Education Majors
- 6.6) Agricultural majors
- 6.7) Biology major
- 6.8) Chemistry major
- 6.9) Physics major
- 6.10) Mathematics major
- 6.11) Environmental majors
- 6.12) Medical majors
- 6.13) Humanities major

Part 3: System Quality Factor

The system quality factor questionnaire is in the form of a rating scale and consists of 5 criteria (15 items in total):

- 1) Adaptability
- 2) Availability
- 3) Reliability
- 4) Response Time
- 5) Usability

The scoring criteria for evaluating WeChat application usage satisfaction are based on a 5-point Likert scale, ranging from "strongly agree" to "strongly disagree".

Please check the options based on your actual situation.

No.	Questions	Strongly Agree (5)	Highly Agree (4)	Agree (3)	Disagree (2)	Strongly Disagree (1)
System Quality						
Adaptability						
7	The university's Wechat official account has updated its security as appropriate.	5	4	3	2	1
8	Improving the university's Wechat official account does not affect the use of the application.	5	4	3	2	1

9	The adaptability of the university's Wechat official account, such as operational stability or maintaining an account, will not affect the user's confidence.	5	4	3	2	1
Availability						
10	The university's Wechat official account system meets your needs well.	5	4	3	2	1
11	The university's Wechat official account system is available all the time.	5	4	3	2	1
12	The university's Wechat official account system is stable; for example, while you are using the connection, it will not be disconnected, etc.	5	4	3	2	1
Reliability						
13	The platform of university's WeChat official account is safe and reliable.	5	4	3	2	1
14	I prefer to the university's Wechat official account system than the university home page system.	5	4	3	2	1
15	I believe that the university's Wechat official account system is just as dependable and effective as its website system.	5	4	3	2	1
Response Time						
16	The university's Wechat official account system has always been responsive and quick to use.	5	4	3	2	1

17	The university's Wechat official account system can always be always quickly connected to various functions.	5	4	3	2	1
18	The university's Wechat official account system responds quickly to connections to the website.	5	4	3	2	1
Usability						
19	The interface of the university's Wechat official account is concise and clear, and the navigation is easy to use.	5	4	3	2	1
20	The university's Wechat official account always have a modern, attractive design such as a graphical user interface, theme color scheme, etc.	5	4	3	2	1
21	The university's Wechat official account has a user-friendly format. Always easy to read, such as clear text, a font size that is easy to read, patterns and colors that do not cause confusion, etc.	5	4	3	2	1

Part 4: Information Quality Factor

The Information Quality Factor questionnaire is in the form of a rating scale consisting of 5 criteria (total of 15 items):

- 1) Relevance
- 2) Completeness
- 3) Accuracy of information
- 4) Timeliness
- 5) Ease of understanding

Scoring criteria for assessing the level of satisfaction with the use of the WeChat application were based on a 5-point Likert scale, ranging from "Strongly Agree" to "Strongly Disagree. **Please check the options based on your actual situation.**

No.	Questions	Strongly Agree (5)	Highly Agree (4)	Agree (3)	Disagree (2)	Strongly Disagree (1)
Information Quality						
Completeness						
22	The information content provided by the university's Wechat official account is rich and comprehensive.	5	4	3	2	1
23	The university's Wechat official account provides information in a variety of expressions (such as videos, pictures, audio, text, etc.).	5	4	3	2	1
24	The information on the university's Wechat official account is highly reliable and of high quality.	5	4	3	2	1
Relevance						
25	The information provided by university's Wechat official account is comprehensive,	5	4	3	2	1

	clear, and complete. has a wealth of sections such as library, curriculum recommendations, admission, digital resources, etc.					
26	The information provided by university's Wechat official account is comprehensive, clear, and complete.	5	4	3	2	1
27	University's Wechat official account can provide the information about university education you need.	5	4	3	2	1
Accuracy						
28	The information provided by the university's WeChat official account you use is true.	5	4	3	2	1
29	The information provided by the university's WeChat official account you use is novel.	5	4	3	2	1
30	The university's WeChat official account you use provides rich and comprehensive information.	5	4	3	2	1
Timeliness						
31	The university's WeChat official account can push information timely and accurately.	5	4	3	2	1
32	The university's WeChat official account clearly mentions when it was last updated.	5	4	3	2	1
33	The university's WeChat official account provides timestamp for all information posted and any time sensitive information on the university's WeChat	5	4	3	2	1

	official account clearly mentions date of last update					
Ease of Understanding						
34	Content and illustrations of university's WeChat official account you can easily read and understand, such as curriculum or admission information, etc.	5	4	3	2	1
35	Content and illustrations of the university's WeChat official account and advertising media are not complicated and do not cause confusion by the use of letters, colors, images, etc.	5	4	3	2	1
36	Content and illustrations of university's WeChat official account are easy to understand without complicated interpretations.	5	4	3	2	1

Part 5: Service Quality Factor

The Service Quality Factor questionnaire is in the form of a rating scale consisting of 5 criteria (total of 15 items):

- 1) Tangible
- 2) Reliability
- 3) Responsiveness
- 4) Assurance
- 5) Empathy

Scoring criteria for assessing the level of satisfaction with the use of the WeChat application were based on a 5-point Likert scale, ranging from "Strongly Agree" to "Strongly Disagree. **Please check the options based on your actual situation.**

No.	Questions	Strongly Agree (5)	Highly Agree (4)	Agree (3)	Disagree (2)	Strongly Disagree (1)
Service Quality						
Tangible						
37	The services provided by the university's WeChat official account you use meet your needs.	5	4	3	2	1
38	The university's WeChat official account enables online communication	5	4	3	2	1
39	In case you need additional information, the service staff is well versed in the education and specifications of the university.	5	4	3	2	1
Reliability						
40	Classmates, teachers, or experts influence you to use the university's WeChat official account	5	4	3	2	1
41	People around me who have a greater influence on me support my use of the university's WeChat official account	5	4	3	2	1
42	University's WeChat official account discloses information that shows credibility to users, such as education information, university information, contact information, etc.	5	4	3	2	1
Responsiveness						
43	University's WeChat official account has services that meet the individual needs of users	5	4	3	2	1

44	University's WeChat official account can quickly respond to users' requests for information.	5	4	3	2	1
45	University's WeChat official account has staff to provide information or respond to questions from users according to standards.	5	4	3	2	1
Assurance						
46	You believe that using the services provided by the university's WeChat official account will not pose a threat to personal privacy	5	4	3	2	1
47	You feel safe in your University's WeChat official account	5	4	3	2	1
48	You think the service functions provided by the university's WeChat official account you use are personalized.	5	4	3	2	1
Empathy						
49	University's WeChat official account has employees who give your personal attention.	5	4	3	2	1
50	University's WeChat official account has employees operating hours convenient to all its users.	5	4	3	2	1
51	The university's WeChat official account has your best interest information, which you needed.	5	4	3	2	1

Part 6: Respondents' Opinions on Satisfaction with Using the WeChat Application

This section of the questionnaire will be used to measure the satisfaction level of the respondents regarding the use of the WeChat application. It includes a question about overall satisfaction with the use of the WeChat application, employing a 5-level Likert Scale with the following values:

- Strongly agree
- Agree
- Neutral
- Disagree
- Strongly disagree

The Likert scale used in the questionnaire consists of 5 levels, each assigned a specific point value, as outlined below:

Strongly Agree:	5 points
Agree:	4 points
Neutral:	3 points
Disagree:	2 points
Strongly Disagree:	1 point

These point values are employed to score respondents' opinions and assessments in accordance with the Likert scale. **Please check the options based on your actual situation.**

No.	Questions	Strongly Agree (5)	Highly Agree (4)	Agree (3)	Disagree (2)	Strongly Disagree (1)
Respondents' Opinions on Satisfaction with Using the WeChat Application'.						
52	You are generally satisfied with the university's WeChat official account mini program	5	4	3	2	1
53	The experience of using the university's WeChat official account has met your expectations	5	4	3	2	1
54	You are willing to give a high evaluation to the university's WeChat official account	5	4	3	2	1

55	You are satisfied with the university's WeChat official account that you currently use.	5	4	3	2	1
56	You think it is wise to choose the currently commonly used university's WeChat official account	5	4	3	2	1



调查问卷:

你好, 我是一名在读硕士生, 我正在进行一项关于“中国西安市大学生微信服务满意度影响因素”的调查问卷, 恳请你用几分钟时间帮忙填答这份问卷。本问卷实行匿名制, 所有数据只用于统计分析, 请放心填写。题目选项无对错之分, 请就以下问题, 在您认为合适的地方打√。占用您的宝贵时间, 真诚的向您表示感谢。

第 1 部分: 筛选问题

1.您目前是中国西安市一所大学的学生吗?

- 1.1) 是
- 1.2) 否 (问卷结束)

2.您使用过微信应用吗?

- 2.1) 是
- 2.2) 否 (问卷结束)

第 2 部分: 人口统计特征

3.性别

- 3.1) 男性
- 3.2) 女性

4.年龄

- 4.1) 18 岁以下
- 4.2) 18 至 22 岁
- 4.3) 22 岁以上

5.教育程度

- 5.1) 大专
- 5.2) 本科

6.目前专业大类

- 6.1) 经济管理类专业
- 6.2) 信息科学类专业
- 6.3) 城建类专业
- 6.4) 新媒体类专业

- 6.5) 国际教育类专业
- 6.6) 农业类专业
- 6.7) 生物学类专业
- 6.8) 化学类专业
- 6.9) 物理类专业
- 6.10) 数学类专业
- 6.11) 环境类专业
- 6.12) 医学类专业
- 6.13) 人文类专业

第 3 部分：系统质量因素

系统质量因素调查问卷采用评级量表的形式，由 5 个标准组成（共 15 个项目）：

- 1) 适应性
- 2) 可用性
- 3) 可靠性
- 4) 响应时间
- 5) 可用性

评估微信应用使用满意度的评分标准基于李克特 5 点量表，范围从“非常同意”到“非常不同意”。请根据您的实际情况勾选选项。

序号	问题	非常同意 (5)	高度同意 (4)	同意 (3)	不同意 (2)	非常不同意 (1)
系统质量						
适应性						
7	学校微信公众号已酌情更新安全性。	5	4	3	2	1
8	完善学校微信公众号，不影响应用程序的使用。	5	4	3	2	1
9	学校微信公众号的适应性，如运行稳定性或账号维护等，不会影响用户的信心。	5	4	3	2	1
可用性						
10	学校的微信公众号系统很好地满足了您的需求。	5	4	3	2	1

11	学校微信公众号系统随时可用。	5	4	3	2	1
12	学校微信公众号系统稳定；例如，在使用连接时，不会断开连接等。	5	4	3	2	1
可靠性						
13	学校微信公众号平台安全可靠。	5	4	3	2	1
14	比起大学主页系统，我更喜欢学校的微信公众号系统。	5	4	3	2	1
15	我相信学校的微信公众号系统和学校的网站系统一样可靠、有效。	5	4	3	2	1
响应时间						
16	学校的微信公众号系统一直反应灵敏、使用快捷。	5	4	3	2	1
17	学校的微信公众号系统始终可以快速连接各种功能。	5	4	3	2	1
18	学校微信公众号系统对网站连接响应迅速。	5	4	3	2	1
可用性						
19	学校微信公众号界面简洁明了，导航简单易用。	5	4	3	2	1
20	大学的微信公众号始终具有现代、有吸引力的设计，例如图形用户界面、主题配色方案等。	5	4	3	2	1
21	学校的微信公众号具有用户友好的格式。始终易于阅读，例如清晰的文本、易于阅读的字体大小、不会造成混乱的图案和颜色等。	5	4	3	2	1

第 4 部分：信息质量因素

信息质量因素调查问卷采用评级量表的形式，由 5 个标准组成（共 15 个项目）：

- 1) 相关性
- 2) 完整性
- 3) 信息的准确性
- 4) 时效性
- 5) 易于理解

微信使用满意度的评分标准采用李克特 5 级量表，从“非常同意”到“非常不同意”，请根据您的实际情况勾选选项。

序号	问题	非常同意 (5)	高度同意 (4)	同意 (3)	不同意 (2)	非常不同意 (1)
信息质量						
完整性						
22	学校微信公众号提供的信息内容丰富、全面。	5	4	3	2	1
23	学校微信公众号以多种表现形式（如视频、图片、音频、文字等）提供信息。	5	4	3	2	1
24	学校微信公众号信息可信度高、质量高。	5	4	3	2	1
关联性						
25	学校微信公众号提供的信息全面、清晰、完整。拥有图书馆、课程推荐、招生、数字资源等丰富的版块。	5	4	3	2	1
26	学校微信公众号提供的信息全面、清晰、完整。	5	4	3	2	1
27	大学微信公众号可以提供您所需的大学教育信息。	5	4	3	2	1
准确性						
28	您所使用的学校微信公众号提供的信息均属真实。	5	4	3	2	1
29	您使用的学校微信公众号提供的信息新颖。	5	4	3	2	1
30	您使用的学校微信公众号提供了丰富、全面的信息。	5	4	3	2	1
时效性						
31	学校微信公众号可以及时、准确地推送信息。	5	4	3	2	1
32	该大学的微信公众号明确提到了最后一次更新的时间。	5	4	3	2	1
33	大学的微信公众号为所有发布的信息提供时间戳，并且大学微信公众号上的任何时间敏感信息都明确提及最后更新日期	5	4	3	2	1

易于理解						
34	您可以轻松阅读和理解的大学微信公众号的内容和插图，例如课程或招生信息等。	5	4	3	2	1
35	学校微信公众号和广告媒体的内容和插图不复杂，不会因字母、颜色、图像等的使用而造成混乱。	5	4	3	2	1
36	大学微信公众号的内容和插图简单易懂，没有复杂的解释。	5	4	3	2	1

第五部分：服务质量因素

服务质量因素调查问卷采用评级量表的形式，由 5 个标准组成（共 15 个项目）：

- 1) 有形的
- 2) 可靠性
- 3) 响应能力
- 4) 保证
- 5) 同理心

微信使用满意度的评分标准采用李克特 5 级量表，从“非常同意”到“非常不同意”，请根据您的实际情况勾选选项。

序号	问题	非常同意 (5)	高度同意 (4)	同意 (3)	不同意 (2)	非常不同意 (1)
服务质量						
有形性						
37	您使用的学校微信公众号提供的服务满足您的需求。	5	4	3	2	1
38	学校微信公众号实现在线交流	5	4	3	2	1
39	如果您需要更多信息，服务人员非常熟悉大学的教育和规范。	5	4	3	2	1
可靠性						
40	同学、老师或专家影响您使用学校微信公众号	5	4	3	2	1

41	周围对我影响较大的人支持我使用学校微信公众号	5	4	3	2	1
42	大学微信公众号公开向用户展示可信度的信息，如教育信息、学校信息、联系方式等。	5	4	3	2	1
反应能力						
43	大学微信公众号有满足用户个性化需求的服务	5	4	3	2	1
44	大学微信公众号可以快速响应用户的信息请求。	5	4	3	2	1
45	学校微信公众号有工作人员按照标准提供信息或回复用户提问。	5	4	3	2	1
保证						
46	您认为使用学校微信公众号提供的服务不会对个人隐私构成威胁	5	4	3	2	1
47	您在大学的微信公众号中感到安全	5	4	3	2	1
48	您认为您使用的学校微信公众号提供的服务功能是个性化的。	5	4	3	2	1
共情						
49	大学的微信公众号有员工给予您个人关注。	5	4	3	2	1
50	大学微信公众号设有方便所有用户的员工办公时间。	5	4	3	2	1
51	学校的微信公众号有你最感兴趣的信息，你需要的。	5	4	3	2	1

第六部分：受访者对微信应用满意度的评价

这部分问卷将用于衡量受访者对微信应用程序使用的满意度。它包括一个关于使用微信应用程序的总体满意度的问题，采用 5 级李克特量表，其值如下：

- 非常同意
- 同意
- 中性的
- 不同意
- 强烈反对

问卷中使用的李克特量表由 5 个级别组成，每个级别都有一个特定的分值，如下所示：

非常同意：5 分

同意：4 分

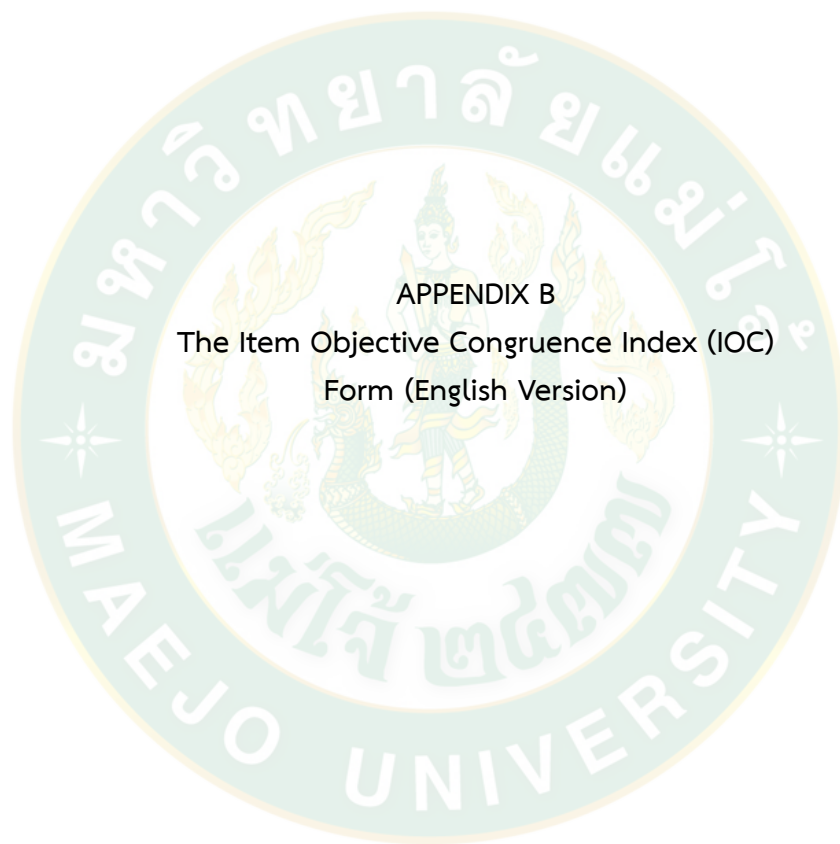
中立：3 分

不同意：2 分

强烈不同意：1 分

这些分值用于根据李克特量表对受访者的意见和评估进行评分。**请根据您的实际情况勾选选项。**

序号	问题	非常同意 (5)	高度同意 (4)	同意 (3)	不同意 (2)	非常不同意 (1)
受访者对使用微信应用程序的满意度的看法。						
52	您对学校微信公众号小程序总体满意	5	4	3	2	1
53	学校微信公众号的使用体验达到了您的期望	5	4	3	2	1
54	您愿意对学校微信公众号给予高度评价	5	4	3	2	1
55	您对目前使用的学校微信公众号感到满意。	5	4	3	2	1
56	您认为选择目前常用的大学微信公众号是明智的	5	4	3	2	1



APPENDIX B

The Item Objective Congruence Index (IOC)
Form (English Version)

Research Topic: An Exploration of Factors Influencing University Students' Satisfaction with WeChat Services in Xi'an City, Shaanxi Province, China

Guideline for evaluation: Please place a checkmark (✓) in the rating box (+1, 0, -1) based on your opinion of the item's appropriateness. Please indicate your opinion towards contents validity of the item.

- +1 means the items is appropriate
- 0 means not sure
- 1 means the item is not appropriate

Part 1: Screening Questions

Guideline for evaluation: Please place a checkmark (✓) in the rating box (+1, 0, -1) based on your opinion of the item's appropriateness

No.	Statements	Degree of content			Comments
		+1	0	-1	
1.	Are you currently a student at a university in Xi'an city, China? <input type="checkbox"/> 1.1) Yes <input type="checkbox"/> 1.2) No (end of the questionnaire)				
2.	Have you ever used the WeChat application? <input type="checkbox"/> 2.1) Yes <input type="checkbox"/> 2.2) No (end of the questionnaire)				

Part 2: Demographic Characteristics

Guideline for evaluation: Please place a checkmark (✓) in the rating box (+1, 0, -1) based on your opinion of the item's appropriateness

No.	Statements	Degree of content			Comments
		+1	0	-1	
1.	Gender <input type="checkbox"/> 1.1) Male <input type="checkbox"/> 1.2) Male				
2.	Age <input type="checkbox"/> 2.1) Under 18 Years Old				

	<input type="checkbox"/> 2.2) 18 Years Old-22 Years Old <input type="checkbox"/> 2.3) Over 22 Years Old				
3.	Education Level <input type="checkbox"/> 3.1) Undergraduate education <input type="checkbox"/> 3.2) Junior college education				
4.	Current Majors <input type="checkbox"/> 4.1) Economics and Management Majors <input type="checkbox"/> 4.2) Information Science Majors <input type="checkbox"/> 4.3) Urban Construction Majors <input type="checkbox"/> 4.4) New Media Majors <input type="checkbox"/> 4.5) International Education Majors <input type="checkbox"/> 4.6) Agricultural Majors <input type="checkbox"/> 4.7) Biology Major <input type="checkbox"/> 4.8) Chemistry Major <input type="checkbox"/> 4.9) Physics Major <input type="checkbox"/> 4.10) Mathematics Major <input type="checkbox"/> 4.11) Environmental Majors <input type="checkbox"/> 4.12) Medical Majors <input type="checkbox"/> 4.13) Humanities Major				

Part 3: System Quality Factor

Guideline for evaluation: Please place a checkmark (✓) in the rating box (+1, 0, -1) based on your opinion of the item's appropriateness.

No.	Statements	Degree of content			Comments
		+1	0	-1	
System Quality					
Adaptability					
1.	The university's Wechat official account has updated its security as appropriate.				
2.	Improving the university's Wechat official account does not affect the use of the application.				
3.	The adaptability of the university's Wechat official account, such as operational stability or maintaining				

	an account, will not affect the user's confidence.				
Availability					
4.	The university's Wechat official account system meets your needs well.				
5.	The university's Wechat official account system is available all the time.				
6.	The university's Wechat official account system is stable; for example, while you are using the connection, it will not be disconnected, etc.				
Reliability					
7.	The platform of university's WeChat official account is safe and reliable.				
8.	I prefer the university's Wechat official account system to the university home page system.				
9.	I believe that the university's Wechat official account system is just as dependable and effective as its website system.				
Response Time					
10.	The university's Wechat official account system has always been responsive and quick to use.				
11.	The university's Wechat official account system can always be quickly connected to various functions.				
12.	The university's Wechat official account system responds quickly to connections to the website.				
Usability					
13.	The interface of the university's Wechat official account is concise and clear, and the navigation is easy to use.				
14.	The university's Wechat official account always has a modern, attractive design such as a graphical user interface, theme color scheme, etc.				
15.	The university's Wechat official account has a user-friendly format. Always easy to read, such as clear text, a font size that is easy to read, patterns and colors that do not cause confusion, etc.				

Part 4: Information Quality Factor

Guideline for evaluation: Please place a checkmark (✓) in the rating box (+1, 0, -1) based on your opinion of the item's appropriateness.

No.	Statements	Degree of content			Comments
		+1	0	-1	
Information Quality					
Completeness					
1.	The information content provided by the university's Wechat official account is rich and comprehensive.				
2.	The university's Wechat official account provides information in a variety of expressions (such as videos, pictures, audio, text, etc.).				
3.	The information on the university's Wechat official account is highly reliable and of high quality.				
Relevance					
4.	The information provided by university's Wechat official account is comprehensive, clear, and complete. has a wealth of sections such as library, curriculum recommendations, admission, digital resources, etc.				
5.	The information provided by university's Wechat official account is comprehensive, clear, and complete.				
6.	University's Wechat official account can provide the information about university education you need.				
Accuracy					
7.	The information provided by the university's WeChat official account you use is true.				
8.	The information provided by the university's WeChat official account you use is novel.				
9.	The university's WeChat official account you use provides rich and comprehensive information.				
Timeliness					
10.	The university's WeChat official account can push information timely and accurately.				

11.	The university's WeChat official account clearly mentions when it was last updated.				
12.	The university's WeChat official account provides a timestamp for all information posted and any time-sensitive information on the university's WeChat official account clearly mentions the date of the last update.				
Ease of Understanding					
13.	Content and illustrations of university's WeChat official account you can easily read and understand, such as curriculum or admission information, etc.				
14.	Content and illustrations of the university's WeChat official account and advertising media are not complicated and do not cause confusion by the use of letters, colors, images, etc.				
15.	Content and illustrations of university's WeChat official account are easy to understand without complicated interpretations.				

Part 5: Service Quality Factor

Guideline for evaluation: Please place a checkmark (✓) in the rating box (+1, 0, -1) based on your opinion of the item's appropriateness.

No.	Statements	Degree of content			Comments
		+1	0	-1	
Service Quality					
Tangible					
1.	The services provided by the university's WeChat official account you use meet your needs.				
2.	The university's WeChat official account enables online communication				
3.	In case you need additional information, the service staff is well-versed in the education and specifications of the university.				

Reliability					
4.	Classmates, teachers, or experts influence you to use the university's WeChat official account				
5.	People around me who have a greater influence on me support my use of the university's WeChat official account				
6.	University's WeChat official account discloses information that shows credibility to users, such as education information, university information, contact information, etc.				
Responsiveness					
7.	University's WeChat official account has services that meet the individual needs of users				
8.	University's WeChat official account can quickly respond to users' requests for information.				
9.	University's WeChat official account has staff to provide information or respond to questions from users according to standards.				
Assurance					
10.	You believe that using the services provided by the university's WeChat official account will not pose a threat to personal privacy				
11.	You feel safe in your University's WeChat official account				
12.	You think the service functions provided by the university's WeChat official account you use are personalized.				
Empathy					
13.	University's WeChat official account has employees who give your personal attention.				
14.	University's WeChat official account has employees operating hours convenient to all its users.				
15.	The university's WeChat official account has your best interest information, which you need.				

Part 6: Respondents' Opinions on Satisfaction with Using the WeChat Application

Guideline for evaluation: Please place a checkmark (✓) in the rating box (+1, 0, -1) based on your opinion of the item's appropriateness.

No.	Statements	Degree of content			Comments
		+1	0	-1	
Respondents' Opinions on Satisfaction with Using the WeChat Application.					
1.	You are generally satisfied with the university's WeChat official account mini program				
2.	The experience of using the university's WeChat official account has met your expectations				
3.	You are willing to give a high evaluation to the university's WeChat official account				
4.	You are satisfied with the university's WeChat official account that you currently use.				
5.	You think it is wise to choose the currently commonly used university's WeChat official account				



APPENDIX C

The Names of Experts for checking the Research Instruments
(English Version)

1. Miss Uthaiswan Sriwichai
Lecturer at Silpakorn University
2. Dr. Wongladda Weerapaiboon
Lecturer at Maejo University
3. Dr. Jirachai Yomkerd
Lecturer at Maejo University





APPENDIX D

The letters for collecting data and content validity of the instruments

MJU 69.18/136



Maejo University, International College
Sansai, Chiang Mai
Thailand 50290

15 September 2023

Subject: Invitation of being a specialist for research instrument

Dear Dr. Wongladda Weerapaiboon

Warm greetings from Maejo University International College (MJU)!!!

I would like to introduce Miss Xintian Du who is our student in the Master of Business Administration, Digital Economics and Management Innovation (International Program). She is currently conducting her independent study research on "AN EXPLORATION OF FACTORS INFLUENCING UNIVERSITY STUDENTS' SATISFACTION WITH WECHAT SERVICES IN XI' AN CITY, CHINA" under the supervision of Asst. Prof Dr. Sutthikam Khong-khai.

In this regard, Miss Xintian Du would like your kind advice, comment, and suggestions on the content validity of her research instrument. Should you need more information, please contact the student at email 1501492861@qq.com or her advisor at email mjuonn@gmail.com

Thank you so much in anticipation of your positive reply relating to this request and her possible further information needs.

Sincerely yours,

A handwritten signature in blue ink, appearing to be 'B. Dangtungee'.

Assoc. Prof. Bapeephun Dangtungee, Ph.D.
Dean Maejo University International College

International College
Tel. 0 5387 5612



MEMO

Department International College Dean's Office Education Services and Student Affairs Tel. 5612

NO. MJU 69.18.1.4/836

Date 15 September 2023

Subject: Invitation of being a specialist for research instrument

Dear: Miss Uthaiwan Sriwichai

I would like to introduce Miss Xintian Du who is our student in the Master of Business Administration, Digital Economics and Management Innovation (International Program). She is currently conducting her independent study research on "AN EXPLORATION OF FACTORS INFLUENCING UNIVERSITY STUDENTS' SATISFACTION WITH WECHAT SERVICES IN XI' AN CITY, CHINA" under the supervision of Asst. Prof Dr. Sutthikarn Khong-khai.

In this regard, Miss Xintian Du would like your kind advice, comment, and suggestions on the content validity of her research instrument. Should you need more information, please contact the student at email 1501492861@qq.com or her advisor at email mjuonn@gmail.com

Thank you so much in anticipation of your positive reply relating to this request and her possible further information needs.

Sincerely yours,

Assoc. Prof. Rapeephun Dangtungee, Ph.D.
Dean Maejo University International College



MEMO

Department International College Dean's Office Education Services and Student Affairs Tel. 5612

NO. MJU 69.18.1.4/837

Date 15 September 2023

Subject: Invitation of being a specialist for research instrument

Dear: Dr. Jirachai Yomkerd

I would like to introduce Miss Xintian Du who is our student in the Master of Business Administration, Digital Economics and Management Innovation (International Program). She is currently conducting her independent study research on "AN EXPLORATION OF FACTORS INFLUENCING UNIVERSITY STUDENTS' SATISFACTION WITH WECHAT SERVICES IN XI' AN CITY, CHINA" under the supervision of Asst. Prof Dr. Sutthikarn Khong-khai.

In this regard, Miss Xintian Du would like your kind advice, comment, and suggestions on the content validity of her research instrument. Should you need more information, please contact the student at email 1501492861@qq.com or her advisor at email mjuonn@gmail.com

Thank you so much in anticipation of your positive reply relating to this request and her possible further information needs.

Sincerely yours,

Assoc. Prof. Rapeephun Dangtungee, Ph.D.
Dean Maejo University International College



APPENDIX E
The Result of IOC

No.	Opinions of Experts			Total	Average IOC
	1	2	3		
1	1	1	1	3	1.00
2	1	1	1	3	1.00
3	1	1	1	3	1.00
4	1	1	1	3	1.00
5	1	1	1	3	1.00
6	1	1	1	3	1.00
7	1	1	1	3	1.00
8	1	1	1	3	1.00
9	1	1	1	3	1.00
10	1	1	1	3	1.00
11	1	1	1	3	1.00
12	1	1	1	3	1.00
13	1	1	1	3	1.00
14	0	1	1	2	0.67
15	1	1	1	3	1.00
16	1	1	1	3	1.00
17	1	1	0	2	0.67
18	1	1	1	3	1.00
19	1	1	1	3	1.00
20	1	1	0	2	0.67
21	1	1	1	3	1.00
22	1	1	1	3	1.00
23	1	1	1	3	1.00
24	1	1	1	3	1.00
25	1	1	1	3	1.00
26	1	1	0	2	0.67
27	1	1	1	3	1.00
28	1	1	1	3	1.00
29	0	1	1	2	0.67
30	1	1	1	3	1.00
31	1	1	1	3	1.00
32	1	1	0	2	0.67
33	1	1	1	3	1.00

34	1	1	1	3	1.00
35	0	1	1	2	0.67
36	1	1	1	3	1.00
37	1	1	1	3	1.00
38	1	1	1	3	1.00
39	1	1	0	2	0.67
40	0	1	1	2	0.67
41	0	1	1	2	0.67
42	1	1	1	3	1.00
43	1	1	1	3	1.00
44	1	1	0	2	0.67
45	1	1	1	3	1.00
46	1	1	1	3	1.00
47	1	1	1	3	1.00
48	1	1	1	3	1.00
49	0	1	1	2	0.67
50	0	1	1	2	0.67
51	1	1	1	3	1.00
52	1	1	1	3	1.00
53	1	1	1	3	1.00
54	1	1	1	3	1.00
55	1	1	1	3	1.00
56	1	1	1	3	1.00
Total Average IOC Value					0.92

CURRICULUM VITAE

NAME Xintian Du

DATE OF BIRTH 15 April 1998

EDUCATION 2017 Bachelor of Financial Management, High tech
College of Xi'an University of Science and Technology of
China

