

# Problems and Solutions of Network Information Technology in University Students' Mental Health Education

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**Abstract:** The aim of this study is to investigate the application of network information technology in university students' mental health education and propose relevant solutions. By conducting a thorough analysis of the evolution, current state, and significance of network information technology in mental health education, this article uncovers the challenges and predicaments faced by this technology in this domain, encompassing issues such as information security, technology advancements, student engagement, and more. Addressing these concerns, the article suggests a range of solutions, including enhancing technology integration, elevating network information technology proficiency, establishing a robust network platform, innovating educational approaches, constructing a dynamic database of mental health education, and an artificial intelligence service system for mental health education. Through the implementation of these strategies, the quality and effectiveness of university students' mental health education can be significantly enhanced. This article argues that with the relentless advancement of technology, network information technology will assume a pivotal role in university students' mental health education, fostering educational innovation and elevating students' mental well-being.

## 1. Introduction

With the swift advancement of information technology and the ubiquitous prevalence of the Internet, it has become an integral component of university students' life and studies [1]. Network information technology has not only transformed traditional lifestyles but also exerted a profound influence on the mental health of university students [2]. In this digital era, university students confront increased information overload and psychological stress, making it imperative to effectively harness network information technology to enhance the standard of their mental health education [3].

Against this backdrop, this study endeavors to delve deeply into the application of network information technology in university students' mental health education, identify prevalent issues, and propose pertinent solutions. This endeavor not only contributes to refining the current theoretical framework of mental health education for university students but also holds significant guiding implications for practical implementation. By leveraging network information technology effectively, we can gain a more precise understanding of university students' psychological states and offer tailored mental health education services, thereby assisting them in better navigating psychological challenges and fostering their holistic and healthy development.

The primary objective of this study is to conduct a comprehensive analysis of the current application of network information technology in university students' mental health education, delve into its existing problems and challenges, and propose targeted solutions. Ultimately, this study aims to provide robust theoretical support and practical guidance for enhancing the quality and effectiveness of university students' mental health education.

## 2. Network information technology and university students' mental health education

### 2.1. Development course and present situation of network information technology

Since the late 20th century, network information technology has undergone swift progression. From the inception of e-mail and web browsing to the present-day prevalence of social media, cloud computing, big data, and more, each technological advancement has significantly transformed people's lifestyles [4]. Notably, in recent years, with the widespread adoption of mobile Internet, network information technology has permeated all facets of people's lives, becoming a crucial instrument for accessing information, communication, and entertainment.

### 2.2. The importance of university students' mental health education

University students are in a critical period of life development, and they are faced with various pressures such as studies, employment and interpersonal relationships. Mental health education can not only help them better cope with these pressures, improve their psychological quality, but also prevent psychological problems and promote their all-round development [5]. Therefore, strengthening university students' mental health education is of great significance for cultivating high-quality talents with physical and mental health and all-round development.

### 2.3. The current application status of network information technology in mental health education

Currently, the utilization of network information technology in mental health education has significantly expanded. Numerous colleges and universities have established dedicated mental health education websites, offering services such as online psychological consultation, psychological testing, and the dissemination of mental health knowledge [6]. In addition, some mental health apps and online courses have emerged, providing more convenient learning paths for university students. However, in practical application, the role of network information technology in mental health education has not been fully exerted, and there are some problems and challenges to be solved, as shown in Table 1.

Table 1 Application status and challenges of network information technology in mental health education

Application form	Concrete content	Application status	Existing problems and challenges
Psychological Health Education Website	Online psychological counseling, psychological testing, popularization of mental health knowledge, etc	Widely established website and providing diversified services	Content update is not timely; Lack of interaction; Uneven degree of professionalism
Psychological Health APP	Provide psychological health self-test, consultation, recording and other functions	Multiple apps available in the market for selection	User privacy protection issues; Information accuracy needs to be improved.
Online courses	Online video courses, lectures, etc. related to mental health education	Easy for students to learn independently, with abundant resources	Uneven curriculum quality; It is difficult to evaluate the learning effect.

Table 1 outlines the current application status, problems, and challenges of network information technology in mental health education. While it offers a novel approach and convenience for mental health education, continuous optimization and improvement are necessary to effectively address the mental health needs of university students.

### 2.4. The importance of network information technology in mental health education

First of all, network information technology can enrich teaching means and educational materials,

making progress in teaching and learning, and getting superior effect. From the perspective of students, they can obtain learning resources anytime and anywhere according to their own interests, which not only broadens the scope of knowledge and timely access to self-help methods, but also improves their learning ability and problem-solving ability. From the perspective of teachers, network information technology enriches the teaching modes and means, which not only makes the abstract teaching content more specific and vivid, and stimulates the students' learning interest, but also improves the effect of education. Secondly, the collection and analysis of data through network information technology can not only improve the efficiency and accuracy of data, but also effectively evaluate and monitor the mental health status of college students, which can prevent the occurrence of psychological problems. Additionally, the dissemination of mental health knowledge and mental health skills can promote the sharing of quality educational resources. At present, some mental health educators in colleges and universities are counselors or hobby teachers, which lack certain professionalism. In the network environment, the sharing of high-quality educational resources can improve the level of University students' mental health education.

### **3. The application of network information technology in university students' mental health education**

#### **3.1. Challenges and dilemmas in the application of network information technology**

The application of network information technology in university students' mental health education has brought many conveniences, but it also faces some challenges and dilemmas [7]. First of all, the security of network information is the primary consideration. Data transmission and storage under the network environment may face the risk of leakage and attack, which is a severe challenge to mental health education involving personal privacy. Secondly, the rapid update of network information technology requires educators to constantly learn and adapt to new technologies, which is a big burden for some educators. Finally, how to ensure the effect and quality of online education is equivalent to that of offline education is also a problem that needs to be solved.

#### **3.2. Analysis of specific problems in university students' mental health education**

There are several specific problems in university students' mental health education:

- (1) Students' participation is not high, and some students lack interest in online mental health education, which leads to poor educational effect.
- (2) Education under the network environment lacks face-to-face communication and interaction, which makes it difficult for educators to accurately grasp students' psychological state and real needs.
- (3) The integration and utilization of educational resources are not sufficient, and there are information islands and waste of resources.

#### **3.3. Analysis of influencing factors and deep-seated reasons**

There are many factors that affect the application effect of network information technology in university students' mental health education. From a technical point of view, the stability and ease of use of network technology directly affect students' experience and learning effect [8]. From the perspective of educators, their level of network information technology and teaching philosophy are also key factors. In addition, students' online learning habits, the importance attached by schools to online education and the recognition of online education by society are also factors that cannot be ignored. The deep-seated reasons include the lack of integration between traditional educational concepts and network information technology, and the imperfection of online education evaluation system.

## **4. Solutions and suggestions**

### **4.1. Strengthen the integration of network information technology in mental health education**

To enhance the effectiveness of network information technology in mental health education, it is crucial for relevant personnel to deepen the integration of technology and educational content. This entails not merely recording and uploading online courses, but also redesigning and developing mental health courses tailored to the unique characteristics of online education. For instance, teachers can incorporate interactive elements to encourage students to think critically and provide feedback during video lessons [9]. Multimedia technologies, such as animations, charts, and virtual reality, can be utilized to present mental health knowledge in a more intuitive manner, facilitating better understanding and mastery by students. Furthermore, combining online and offline teaching modes is pivotal. Online courses offer students flexible learning schedules and locations, while offline practical activities enable them to apply their learned knowledge in real-life situations, fostering deeper understanding and retention.

### **4.2. Improve the network information technology literacy of educators and university students**

In the digital age, both educators and students need to have certain network information technology literacy. For educators, they should not only master basic network operation skills, but also learn how to make high-quality online courses and how to guide students to learn effectively online. Therefore, it is very necessary to provide network information technology training for educators on a regular basis, which can help them constantly update their technical knowledge and teaching concepts and improve the quality of online education.

It is equally important for students to cultivate their awareness and ability of online learning. Students need to learn how to screen out valuable learning resources from the massive network information and how to use online tools to study efficiently. Schools can improve students' network information technology literacy by offering related information technology courses or organizing online learning competitions.

### **4.3. Construction of a network platform for mental health education**

A comprehensive mental health education network platform should encompass diverse functions catering to the varied needs of students. Firstly, it should offer a wide array of learning resources, including video courses, e-books, and online tests, enabling students to select based on their interests and requirements. Secondly, the platform should provide accessible interactive communication channels, such as online forums and real-time chat rooms, fostering communication and discussion between students and educators or peers. Additionally, leveraging big data and artificial intelligence technology, the platform can recommend personalized learning paths and resources to each student, enhancing their learning outcomes.

Moreover, user experience design plays a pivotal role in the platform's development process. The interface of the platform should be concise and clear, and the operation should be convenient and smooth to ensure that students can easily get started and enjoy the learning process. Furthermore, the platform should regularly collect and analyze users' feedback, and constantly optimize and improve the functions and services of the platform.

### **4.4. Innovating the mode and method of mental health education**

The traditional mode of mental health education often focuses on teachers' teaching, while students passively accept knowledge. However, under the network environment, we can try more innovative educational models and methods. The comparison between traditional and network mental health education modes is shown in Figure 1.

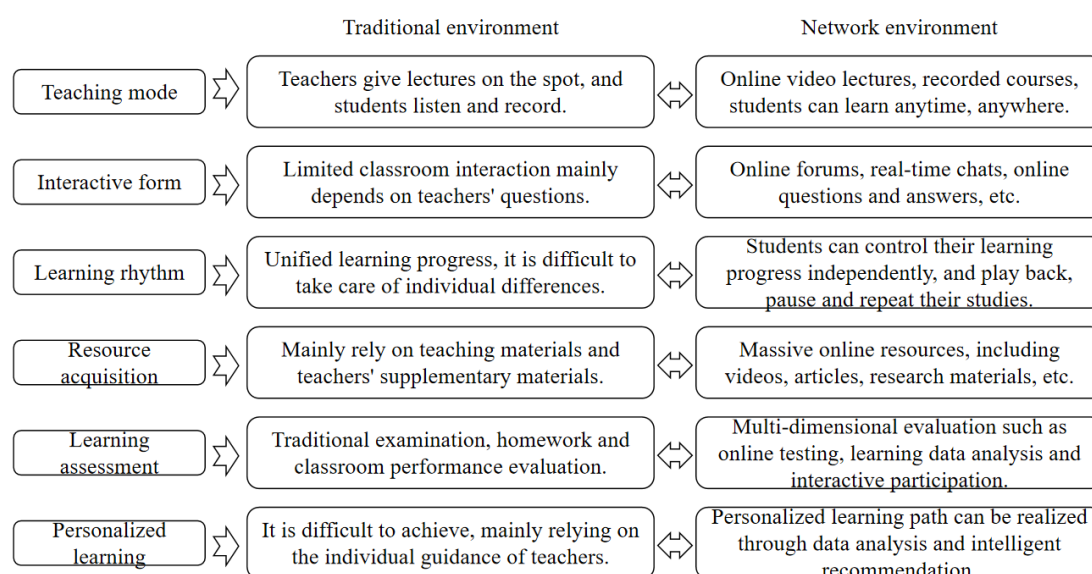


Figure 1 Comparison of mental health education modes between traditional and network environment

Innovating the mode and method of mental health education needs to constantly explore in practice. For example, online and offline modes can be implemented simultaneously in the multimedia classrooms. In offline teaching, teachers can communicate with students face-to-face, so as to ensure that students can learn knowledge intuitively, and observe the reaction and learning effect of the students. At the same time, the offline teaching integrates with online video course, or analyzes online learning cases, and show the stories of outstanding person, etc. to stimulate students' curiosity and teach students how to learn. This can guide students to actively utilize the network to learn and explore knowledge according to their own interests and needs after class.

Furthermore, the utilization of big data and artificial intelligence technology enables a deeper analysis of students' learning behaviors and needs. By collecting and analyzing their learning data, we can identify specific difficulties and doubts encountered during the learning process, allowing for more precise and personalized counseling and support. This data-driven approach to education not only enhances students' learning outcomes but also assists educators in gaining a better understanding of students' learning situations, enabling timely adjustments to teaching strategies and methods.

#### 4.5. Construction of a dynamic database of mental health education

While ensuring personal privacy, the colleges and universities construct a unified database of mental health education. This database integrates and analyzes the psychological status of university students of all grades and ages, and updates the data in time, such as the psychological test data of freshmen, the data of students with interpersonal problems, and the tracking data of psychological counseling. So, educators can obtain reliable and timely psychological data more efficiently by the analysis of database data, which makes the supervision of college students' mental health more convenient. At the same time, the summary of the law and characteristics of university students' psychological development can show the way for mental health education and prevention of psychological problems.

#### 4.6. Construction of an artificial intelligence service system for mental health education

Because of that psychological counseling involves personal privacy, some students are ashamed to get help offline when they encounter psychological problems. Therefore, it is more acceptable for students to learn or counsel of psychology online. Utilizing the artificial intelligence service, the system will provide professional feedback and constructive suggestions based on the results of learning or consulting, so that students can learn to help themselves and others. For example, students will receive professional guidance and feedback after online psychological testing, such as

a artificial intelligence psychological counseling services. If the test results are general psychological problems, artificial intelligence can provide short-term regular psychological counseling services for the client. If the test results are suspected of mental illness, artificial intelligence can recommend client to a specialized hospital to get the professional help. At the same time, artificial intelligence provides the nearby hospitals and the hospitals' introduction, as well as the online appointment or registration methods for students to choose and see a doctor. In this way, by constructing an artificial intelligence service system of psychological testing-psychological counseling or psychological treatment, we can use the convenience of network information technology to provide services for university students' mental health education.

## 5. Conclusions

As network information technology continues to advance and proliferate, its application in mental health education for university students is poised to become more extensive and profound. This study engages in a thorough examination of the application of network information technology in mental health education, analyzing the prevalent challenges and dilemmas, and proposing targeted solutions.

Anticipating the future, this article anticipates a seamless integration of network information technology into mental health education practices, offering university students a more personalized and efficient learning experience. Furthermore, the relentless innovation of technology, including advancements such as virtual reality and artificial intelligence, promises to introduce diverse teaching methodologies and evaluation techniques, ultimately enhancing the overall quality of mental health education. We are confident that through the collaborative advancement of technology and education, the mental health of university students will significantly improve, fostering a solid foundation for their holistic development.

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