

# Research on Innovative Application of Information Technology in Mental Health Education in Colleges and Universities

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**Abstract.** With the popularization of the Internet and the rapid development of information technology, how to fully apply information technology in all aspects of college education and teaching has become a very important research content. Starting from the analysis of the current status of mental health education in colleges and universities, this paper focuses on the characteristics and advantages of informatization of mental health education in colleges and universities from three aspects, including improving student information database, enriching educational forms and contents, and realizing effective communication online and offline, and puts forward the application strategies of informatization technology in mental health education in colleges and universities. The aim is to improve the effect of mental health education in colleges and universities and promote the practice and development of mental health education informatization.

**Keywords:** Colleges and universities; Mental health; Information technology; Informatization of education

## 1. Introduction

The construction of a scientific, digital and intelligent daily ideological and political education system for college students, and the promotion of the transformation and upgrading of daily ideological and political education for college students to "accurate ideological and political" and "intelligent ideological and political" are the practical needs of daily ideological and political education for college students to adapt to the development, and are also an important growth point and strong driving force for further improving the quality and efficiency of daily ideological and political education<sup>[1]</sup>. At present, there are some problems in the mental health education curriculum, such as poor pertinence of the course content, unclear goal, single teaching method and assessment standard, few class hours and low enthusiasm of students. Therefore, how to carry out the curriculum reform of mental health education is an urgent problem that needs to be solved<sup>[2]</sup>. College students are the largest group using the Internet, so colleges and universities need to adapt to the needs of students, update the educational concept according to the characteristics of learners, change the traditional teaching mode of mental health courses, explore the application of information technology in teaching, stimulate students' interest in learning, mobilize students' enthusiasm for learning, and improve the classroom teaching effect. As is well known, technologies and methods such as machine

learning and deep learning are widely applied in the field of mental health and its treatment, playing an important role in promoting the recognition and diagnosis of mental health<sup>[3-4]</sup>. How to apply information technology to college students' mental health courses is a new topic for college educators and a developing trend of curriculum reform and innovation<sup>[5-6]</sup>.

## **2. Current Situation of Mental Health Education in Colleges and Universities**

### **2.1 Students' psychological problems are increasingly complex**

At present, the psychological problems of college students are characterized by diversification and complexity, which requires colleges and universities to carry out targeted analysis and research on the situation of different students, so as to better carry out psychological assistance and guidance for students. On the one hand, the academic tasks of college students are heavy, and many students have not been able to transfer from the passive learning mode of high school, which leads to students being at a loss when they need more independent learning at the university stage. Some students even have anxiety, tension and other emotions because of their unadaptation to the learning mode, and think that the learning pressure is too great to be resolved through self adjustment, Over time, it is easy to cause more serious psychological problems and even psychological diseases. The specific reasons for students' psychological problems are different. The most important thing for colleges and universities is to educate and guide students to correctly handle their emotions, scientifically and effectively prevent and treat psychological diseases. On the other hand, in the face of increasingly fierce social competition environment and employment pressure, college students are required to strengthen their own psychological quality in order to better cope with the challenges of future life and work. The psychological problems caused by family factors are also a common phenomenon at present. Due to the lack of companionship and communication between parents and children, there are deviations in concepts and ideas, but parents have high requirements and expectations for children. When children's performance cannot meet their parents' expectations, it is easy to have contradictions and conflicts between parents and children, which will lead to students' self blame and negative emotions, resulting in serious psychological problems.

### **2.2 The proportion of full-time teachers is insufficient**

At present, most universities have established specialized mental health education centers responsible for coordinating the mental health education work of the entire school. However, due to the late start of mental health education work in domestic universities, the current task of mental health education in universities is heavy, and there is an imbalance in the proportion of psychological personnel. Establishing a collaborative university psychological education team and its working mechanism is one of the important guarantees for the smooth implementation of mental health education. On the one hand, the mental health education center of the school needs to be responsible for the course teaching of mental health education for all freshman students in the school, which has a great demand for the teachers of mental health teachers in colleges and universities. It is also because of the professionalism of mental health education courses that teachers with academic background in psychology can only teach them, which also puts forward relatively high requirements for the professional psychology teachers in colleges

and universities. On the other hand, due to the increasingly complex mental health state of college students, the demand for psychological counseling is increasing, which also puts forward higher requirements for the construction of college psychological counseling team. In order to better serve the psychological counseling needs of students, it is also necessary to conduct multi-dimensional training for counselors, and constantly improve the ability and level of psychological counseling. Therefore, at present, whether from the perspective of mental health education curriculum or from the perspective of students' psychological counseling, more requirements are put forward for the needs of psychological full-time teachers in colleges and universities. Colleges and universities need to continuously strengthen the number of full-time teachers in order to better meet the actual needs of students' mental health education.

### **2.3 Systematic mental health education is not enough**

At present, the mental health courses in universities are mainly concentrated in the lower grades of freshmen and sophomores. There is a phenomenon of weakening the strength of higher grade education, and mental health education is not systematic enough. How to make the mental health knowledge really comprehensive landing is one of the important contents of strengthening mental health education in the new era. Therefore, we should pay attention to the mental health education of the whole stage of the university, scientifically set up mental health education courses, strengthen the construction of mental health courses online and offline, in-class and extracurricular, and ensure that students can receive psychological knowledge education and popularization in time from admission to graduation, educate students to master the necessary mental health knowledge and skills, and effectively enhance students' psychological literacy. In order to ensure the smooth development of mental health education, colleges and universities should also formulate documents and requirements for mental health education, and stipulate the related responsibilities and contents of students' mental health education. Colleges and universities should give full play to the strength of students' peers, faculty, functional departments, parents and alumni, and jointly help students establish mental health awareness, optimize psychological quality, and enhance psychological adjustment ability and social adaptability. Especially for freshmen who just entered the freshman year, the school should develop a more standardized and systematic freshman mental health education program, and carry out education and guidance from multiple dimensions such as freshmen adaptation, habit formation, behavior norms and career planning, so as to further improve students' mental health quality.

## **3. Characteristics and advantages of informatization of mental health education in colleges and universities**

### **3.1 Improve the student information database and enhance work accuracy**

One of the most important tasks in college mental health work is the evaluation of students' mental health and the establishment of students' mental growth files. This requires giving full play to the advantages of information technology by establishing an information database. From the beginning of students' freshman year, the information and dynamics of every student's participation in mental health survey, mental health consultation and psychological education activities were recorded in real time. In the student port, students can also view their own

database at any time according to their actual situation, and verify, supplement or explain the data. At the same time, at the school port, the school can process and analyze all the collected data, and conduct in-depth comparison and analysis of each student's mental health through the processing of some information technology. Students with abnormal psychological indicators can be identified through relevant algorithms, and the school can conduct in-depth research on the abnormal situation of the student in the first time. When students deal with psychological crisis and need timely intervention, the data platform can make early warning response, so as to effectively intervene in the abnormal behavior of students more quickly and ensure the safety of students. In addition, the information-based data platform can improve the accuracy and scientificity of mental health education in colleges and universities. Through the objective presentation and analysis of data, students' mental health status can be more accurately grasped and students can be further provided with more accurate services and help. It can be seen from the questionnaire of students that students have a high demand and acceptance for the network and information transmission, and they are more willing to accept the network platform to express their true thoughts and needs, which provides a good protection for students' personalized and private content to a certain extent.

### 3.2 Enrich the form and content of education and improve students' participation

At present, the platform and resources of network education are constantly updated and enriched, and the mental health education in colleges and universities is also developing in the direction of sample, and the channels for students to participate in mental health education are also increasing, which greatly improves the participation of students. On the one hand, with the support of information technology, the form of psychological education activities is no longer limited to classrooms, dormitories and other places, and is no longer restricted by space, which can provide students with more cross-school and cross-regional psychological education activities. For example, students can participate in the school's psychological education activities on the network learning platform at any time, and students can also choose activities according to their own needs. On the other hand, information technology can also enable colleges and universities to put the universal knowledge of mental health education on the network platform, so that students can independently view, understand and learn, and diversified psychological knowledge can further improve students' psychological literacy and improve their mental health level.

**Table 1** A survey of sophomores

| Total number of students                            | Boys               |                    | Girls            |                   |
|---|--------------------|--------------------|------------------|-------------------|
| 310   | 255                |                    | 55               |                   |
| Survey question 1                                   | Less than 1 hour   | 1-3 hours          | 3-5 hours        | more than 5 hours |
| How much time do you spend on your phone every day? | 2                  | 56                 | 117              | 135               |
| Survey question 2                                   | Everyday           | Once a week        | 2-3 times a week | 1-2 times a month |
| How often do you contact your parents?              | 46                 | 120                | 95               | 49                |
| Survey question 3                                   | Be better with Dad | Be better with Mom | As good as       | Neither good      |
| The relationship with your parents?                 | 8                  | 89                 | 204              | 9                 |

As is shown in Table 1, some information was obtained from a survey of sophomore students. More than 81% of the students use mobile phones for more than 3 hours a day, 38% of the students will contact their parents once a week, and more than 65% of the students have a good relationship with both parents. It can be seen that the students have a high frequency of mobile phone use, and have a good relationship and communication with their parents, and students are more receptive to online communication. Therefore, colleges and universities should strengthen the content of online psychological education and improve the initiative and enthusiasm of students.

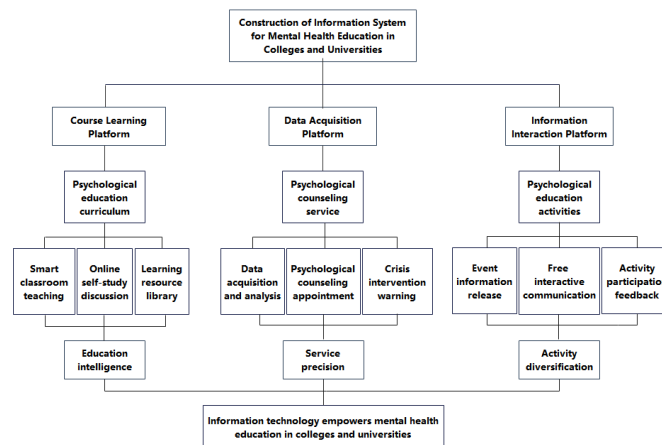
### **3.3 Realize effective communication online and offline to improve students' interest**

Colleges and universities should also pay attention to the great linkage of campus cultural activities in all aspects such as morality, intelligence and labor, focusing on the psychological characteristics and actual needs of contemporary college students, and actively explore new ways and use new carriers. Colleges and universities should give full play to the important roles of physical education, aesthetic education, labor education and campus cultural activities. Build a three-dimensional rich, online and offline linkage of psychological education brand activities, and widely attract students to participate in the activities. In addition, the level of information teaching of psychology course teachers needs to be further improved. Due to the rapid development of the Internet and information technology, the level of information teaching of college courses is also constantly improving, which requires college teachers to timely learn and master the latest information teaching tools and methods, and improve the scientific teaching. At the same time, communication and cooperation between colleges and families are particularly important. At this stage, colleges and universities should make full use of information channels to strengthen interaction and feedback with families, so as to better realize students' psychological attention and guidance.

## **4 Application strategy of information technology in college mental health education**

### **4.1 Set up a system of mental health education authors and Affiliations**

It is very important and necessary to establish and improve the mental health education system of college students from the actual situation of colleges and universities. The schematic diagram of the mental health education system in universities is shown in Figure 1. The establishment of rules, regulations and operating mechanisms at all levels can ensure the smooth and orderly development of the work. Under the background of highly developed information technology, the construction of mental health education system in colleges and universities needs to integrate the concept of integrating data and interaction, enrich the content of mental health education, improve the mechanism of mental health education, and promote the work of mental health education in colleges and universities to achieve greater results.



**Figure 1.** Diagram of Mental Health Education System

#### 4.2 Improve the psychological counseling service process

Psychological health is an essential characteristic of happiness, and mental health services are the core of social psychological services. School mental health services are the main way of mental health education<sup>[7]</sup>. Psychological counseling evaluation and crisis intervention is one of the most core work in college mental health education. With the support of information technology, college psychological counseling evaluation can be more scientific and accurate, while psychological crisis investigation and intervention work is more timely and effective, and gradually becomes systematic. First of all, there are two sources of discovery of psychological crisis events, one is the early warning of the crisis system, and the other is the discovery of crisis situations in life. No matter what kind of discovery channel, the first thing you need to do is to find the student himself and understand the real psychological state of the student. Under the premise of ensuring the safety of students, the psychological state assessment is carried out. Through the psychological assessment and the evaluation of psychological counselors, the mental health of students is obtained comprehensively. If the student's psychological crisis index is high, it is necessary to notify the student's guardian immediately, and send the student to the doctor in time. With the help of professional doctors, the student can gradually recover. If the psychological crisis index of students is not high, but there is still a risk of crisis, then the school needs to maintain continuous attention and help for students, and further give students more guidance and support in study and life. In the process of psychological crisis intervention, mental health network at all levels of the school should be established, feedback channels should be unblocked, and systematic data analysis should be emphasized.

#### 4.3 Build a team mechanism of full cooperation

At present, the psychological education resources of various colleges and universities are openly shared. Through integrating resources, establishing a university alliance team, and conducting research on mental health education, it is ensured that the mental health education work is advancing with The Times and meeting the actual needs and needs of students. At the same time, we can also establish a parent committee, establish a data archive, strengthen the interaction between family and school, give play to the joint force of parents and schools,

collect and analyze the parents' understanding of students through the system in real time, visit parents regularly, and grasp the mental health of students in a comprehensive and timely manner. At the internal level of the school, we must first set up a mental health education leading group led by the school leaders to carry out the overall planning of various psychological teaching and activities, and set up a mental health education center for college students to be responsible for the development of specific psychological work. Set up secondary psychological workstations at the level of each department, and carry out mental health education in each college under the guidance of the mental health education Center. At the class level, each class selects a psychological committee member to assist in carrying out psychological education activities and the attention of students' psychological state. In addition, one dormitory leader is selected in each student dormitory to carry out the class psychology work together with the class psychology committee. From the five levels of off-campus, on-campus, college, class and dormitory, we should establish a platform for information exchange and communication, and do a solid job in mental health education in colleges and universities.

## 5 Conclusions

Students' mental health education is in a basic position in modern education, which is not only related to students' current psychological and emotional state, but also has a profound impact on students' future growth and development<sup>[8]</sup>. Effectively introducing information technology, improving the efficiency of mental health education, actively making use of network resources, expanding education space, and quantitatively analyzing students' mental health problems by using information technology are the keys to promote the development of mental health education in colleges and universities. Mental health educators in colleges and universities should constantly improve their own abilities, so as to better build online and offline mental health education platforms, so as to achieve the purpose of improving the level of mental health education of college students<sup>[9-10]</sup>.

**Acknowledgment.** This paper is supported by the 2022 Central University Basic Research Business Fee Project (Student Ideological and Political Education Special Project) of the University of Electronic Science and Technology of China. Project number: ZYGX2022ZCYJ007-1.

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