Mobile Terminal-Based Remote Counseling Education System for Middle School Students' Mental Health

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Abstract. Mental health education is conducive to the improvement of personality, so college students' mental health education has gradually received attention, and it is necessary to comprehensively consider optimizing students' psychological quality and improving students' mental health level. The traditional mental health distance counseling education system has gradually been unable to meet the current teaching needs, so based on the mobile terminal, a new mental health distance counseling education system for middle school students is designed. The hardware part designs the time counter and storage, and the software part designs the mental health distance counseling education framework first. Secondly, based on the mobile terminal, a distance counseling education model for middle school students' mental health is constructed. Finally, a functional module of mental health remote counseling is designed, and an auxiliary teaching database is designed. The system test results show that the designed mental health distance counseling education system has good performance, can achieve efficient distance education, and has certain application value. The system can be used as a reference for follow-up mental health distance counseling education.

Keywords: Mobile terminal · Middle school students · Mental health · Distance · Counseling education system

1 Introduction

Whether it is the needs of psychological development research, or the needs of educational practice. Guided by the system development concept and development concept, carry out research on the development of mental health system [1]. Under the unique social and cultural environment of our country, the research on the influence mechanism of different levels of social system on the psychological development of college students. It will greatly promote our systematic understanding of the psychological development of college students [2]. Individuals will inevitably experience various psychological conflicts and contradictions in the process of psychological growth. If they are not adjusted

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properly, they will also cause psychological disorders and even psychological diseases. The proposal of behavioral view has enlightening significance for our work on individual psychological counseling and psychotherapy. Only by organically combining the promotion of individual psychological growth with changing the external environment. The two can adjust to each other and change synchronously in order to receive long-term stable effects [3]. For example, only mental health education is provided to students, without changing the educational concepts and methods of teachers and parents. It is very difficult to work without changing the cultural environment of the community and of the society as a whole.

The survival value of an individual is reflected in the realization of personal goals, and the realization of personal goals is closely related to the natural and social environment in which they live. The realization of personal goals depends on the behavior of the individual [4–6], and to understand the behavior of an individual, we must first understand the environment he is in. Individual behavior occurs in the interaction between individual and individual, individual and nature, and individual and society. Understanding the relationship between the individual and the environment can help to regulate and control the behavior of the individual. Make it move in a direction that benefits both the individual and the environment. In addition, people are individuals with subjective initiative. If people purposefully control the behavior of the environment [7], consciously promote the harmony between the natural environment and the social environment. Strengthening the correct guidance of individual behavior will be conducive to the realization of individual goals.

The formation of a healthy psychological mechanism is the result of the joint action of multiple elements and multiple systems. Once it is formed, it will help college students to form a good personality and psychological quality and improve their psychological endurance to overcome learning difficulties. Stimulate the enthusiasm and creativity of learning, so as to improve learning efficiency and develop intelligence. In the learning process [8], if college students are full of vigor and happy, they will mobilize the enthusiasm of their intellectual activities and promote the development of intelligence. On the contrary, it will hinder the development of intelligence and is not conducive to the completion of studies. Poor academic performance in turn causes new psychological problems or exacerbates the original bad psychological state, leading to a vicious circle. It can be seen that overcome bad emotions and maintain a happy mental state. Maintaining a good and healthy state of mind is an important condition for creative thinking, improving learning efficiency, and mastering scientific and cultural knowledge. Healthy psychology is the foundation for college students to successfully complete their studies. It is the need of modern education to carry out mental health education for college students, which will play a positive role in promoting talent training.

Therefore, this article proposed based on the mobile terminal middle school student mental health remote instruction education system. The hardware part designs the time counter and memory. Memory is the use of faster storage performance, cost consumption structure more reasonable pyramid structure. In the software part, on the basis of the framework of mental health remote counseling education, the related indexes of remote counseling model are calculated. And designed the remote tutoring function module,

auxiliary teaching database. To achieve rapid, effective and stable psychological health of secondary school students remote counseling.

2 Hardware Design

2.1 Time Counter

Because distance tutoring education requires higher signal capture efficiency. Therefore, the designed system adopts the time counter to improve the communication quality of the system. After the signal is input to the counter, it needs to go through a shaping circuit. The main components of a general shaping circuit include an attenuator, an amplifier and a Schmitt trigger. The Schmitt trigger is required. It can change the output of the amplifier to be compatible with the internal format of the count register [9, 10]. The sensitivity of a counter is measured by the minimum value of a particular input pulse that the counter can recognize and count. It is determined by the gain of the amplifier and the hysteresis voltage difference of the Schmitt trigger. But the counter is not as sensitive to the input signal as possible. In general, conventional counters have a very sensitive front end and allow a wide range of frequency inputs. Then there is a possibility of spurious triggering due to noise. The optimum sensitivity of the counter is largely dependent on the impedance of the input. Because the higher the impedance, the more susceptible the counter is to noise, which can cause the counter to generate false counts. Usually, a reasonable sensitivity is set by a suitable input impedance, so as to avoid false triggering caused by noise as much as possible.

In the system, the analog time is measured by converting it into a digital quantity. The quantization step size, ie the least significant bit, represents the smallest time interval that the system can measure. Therefore, LSB can be used to represent the measurement resolution of the TDC system. The concept of RMS resolution is often used when evaluating TDC systems. RMS resolution is calculated by taking multiple measurements for a fixed time. Calculate the mean square error between the measured value and the true value to get the RMS resolution of the system. The schematic diagram of the counter based on this design is shown in Fig. 1 below.

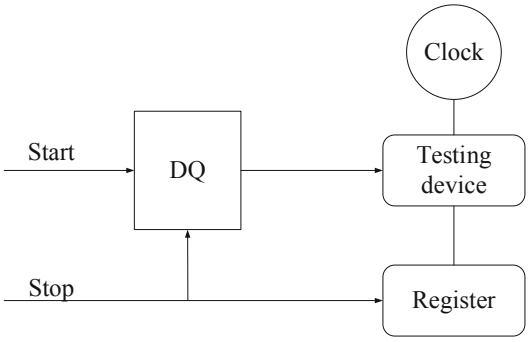

Fig. 1. Counter schematic

As can be seen from Fig. 1, the existing time-to-digital conversion technology is basically based on the "start-stop" model. The so-called "start-stop type" has a start signal as the measurement start signal, and a stop signal as the measurement stop signal. Using the timing device in the system, measure the time interval between the start signal and the stop signal. In contrast to "start-stop" measurement methods are pipelined and data-driven measurement techniques.

The measurement resolution of the direct counting method directly depends on the frequency of the reference clock. To achieve higher resolution, it is necessary to increase the frequency of the reference clock. As a method of precise time measurement, it is necessary to achieve ns-level resolution. This requires the reference clock frequency to reach the order of GHz, which is difficult to achieve in the current electronics field. But this does not mean that the direct counting method has lost its use value. This method can achieve a large measurement range when the number of counters is sufficient. So this method is usually used in large-scale testing. Early time interpolation methods used tapped coaxial cables as delay elements, but the cables were bulkier. And the measurement consistency is poor, and then gradually eliminated. Due to developments in the semiconductor industry, tapped delay lines can be formed using basic CMOS gates as interpolating cells. Using CMOS gates as delay elements can reduce the complexity of the design and achieve a good level of integration.

2.2 Storage

There is a lot of educational information within the Mental Health Distance Counseling Education System. Therefore, the system's ability to access and call data determines the performance of the system. Therefore, the relevant memory is designed, and the architecture overview is shown in Fig. 2 below.

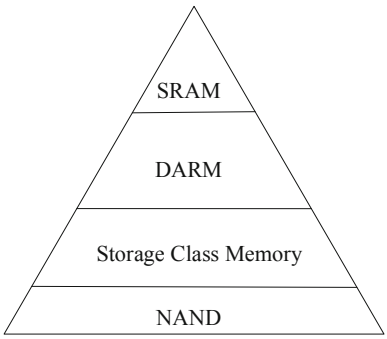

Fig. 2. Memory architecture

As can be seen from Fig. 2, in order to break this bottleneck in the von Neumann architecture, an integrated storage-computing architecture is proposed. This pyramid - level memory structure. Each memory device in this structure deals only with its neighbor storage devices. A cache-based memory hierarchy works because slower storage devices are cheaper than faster ones, and because programs tend to show locality. The underlying

storage device has a block concept as the basic unit of reading. Usually a block contains multiple data, and later access to other objects in the block hits the cache due to spatial locality, making up for the first access block copy. Caching we use SRAM chips. The cached SRAM circuit is simple, so access is very fast. DRAM main memory chips are denser, have larger capacity and are cheaper than SRAM chips. SCM (Storage-Class-Memory) is literally defined as storage level memory, which has the advantages of both memory and storage. NAND flash memory is a non-volatile storage technology, that is, it can save data after power off. Its goal is to reduce the cost of storage per bit and increase storage capacity. This system architecture not only retains the storage and read/write functions of the storage circuit itself, but also supports different logic or multiplication and addition operations. Thus, frequent bus interactions between the central processing unit and the memory circuits are largely reduced. It also further reduces a large amount of data movement and improves the energy efficiency of the system. In the deep neural network processor based on the memory-computing integrated architecture. The weight data can be directly processed by MAC operation without reading, and the final multiplication and addition result can be directly obtained. So the throughput of the system will no longer be limited by the limited memory read interface.

At present, there are two main types of in-memory computing design schemes: one is the in-memory computing design based on random access memory. The other is an in-memory computing design based on non-volatile memory. These two types of in-memory computing designs adopt the design scheme of analog-digital mixed circuit to reduce the energy and area consumption of the system. However, these two types of designs still have many design challenges, including the improvement of operation accuracy. The reduction of area consumption and the non-linearity and operation errors caused by changes in process parameters. The challenge facing in-memory computing is the limited bus bandwidth for the interaction between CPU and Memory. On the one hand, the in-memory computing design retains the storage and read-write functions of the original Memory circuit. On the other hand, in-memory computing designs can work in compute mode for Boolean logic or multiply-add operations. Early researches related to in-memory computing in a broad sense were mainly used with new non-volatile memory devices to realize simple gate logic operations. Also called non-volatile logic circuit.

Several typical non-volatile memory devices include: memristor random access memory, spin torque magnetic random access memory, phase change random access memory and ferroelectric random access memory. In the related non-volatile logic circuit design, general logic operations, such as AND or non-basic gate circuits, etc., can be performed directly on the storage element. In traditional SoCs, complex interfaces are required to connect volatile random access memory and nonvolatile memory. Due to limited bus bandwidth constraints and the pyramid level of Memory. Data cannot be transferred in a massively parallel manner, which slows down the transfer. Moreover, the two groups of memory circuit units will occupy a larger chip area. therefore. When the system restarts from standby, data can be transferred and processed faster, resulting in higher energy efficiency. In the design of a deep neural network processor, whether it is a convolutional neural network layer or a fully connected neural network layer, a large number of multiplication and addition operations are required. At present, a lot of

research is still on optimization based on von Neumann architecture, such as multi-core and multi-thread operation, and high-bandwidth on-chip storage technology.

3 Software Design

3.1 Designing an Educational Framework for Distance Counseling for Mental Health

The mental health system for middle school students is aimed at students in secondary vocational schools, aiming to build a comprehensive platform for students to learn mental health knowledge, understand their own mental health status, and consult psychological problems. Use the platform to prevent and solve mental health problems in middle school students. So as to help students develop good psychological quality, enhance psychological tolerance and self-solve psychological problems. To better provide strong support for the study and life of middle school students. According to the actual needs of middle school students' mental health education work, the demand analysis of middle school students' mental health system is carried out.

The system is an important platform for students to learn mental health knowledge, and professional mental health learning knowledge is published online. To enable students to correctly deal with psychological problems in the learning process, to establish good habits and mentality. Parents of students can also browse the website to learn about students' mental health. Help parents master the methods to guide their children to overcome psychological problems. Provide students with a database query function of mental health-related information. Teachers complete the related operations of publishing knowledge and modifying knowledge on the teacher page. Students can keep up to date with the latest knowledge on the browser. When students select psychological knowledge on the student interface, they can see the psychological knowledge sent by the teacher. Psychological knowledge includes title, content and release time, when the number of psychological knowledge records is automatically paginated. In this function, teachers can add, modify, and delete knowledge.

The system adopts the B/S three-tier architecture mode, and the client browser accepts the user's request and sends it to the application service. The application service obtains data from the database service. The App Service computes the data and submits the result to the client. The client's browser displays the result in the form of a web page. The B/S three-tier architecture model is adopted, which can reduce the work recapture of the client, and does not have high requirements on the client. As long as the browser is installed, it is easy to implement, and the management and maintenance of the system are relatively simple. As long as it can be done on the server side, the architecture of the system is shown in Fig. 3 below.

As can be seen from Fig. 3, the user layer: a user interface is provided to the user through the browser, and the user sends a request to the network server through the browser to perform related operations. Business logic layer: that is, the layer that implements functions, and is the core layer on the Web server side in the entire system. Its task is to accept user requests. If data access is required, the Web server sends SQL commands to the database server to apply for data processing. When the database server completes the data processing, it will return the result data to the Web server. The web

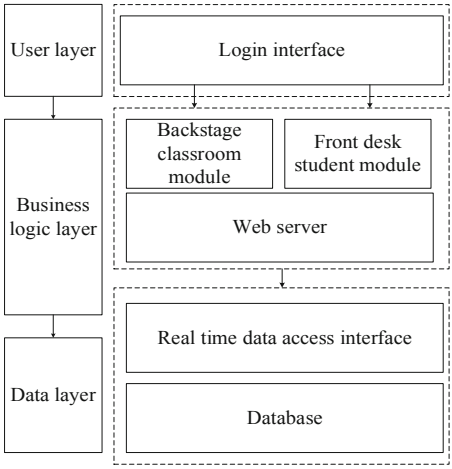

Fig. 3. Mental health remote counseling system architecture

server performs logical processing on the data to generate the final web page information, and transmits it back to the client browser through the network.

Data layer: This layer is mainly implemented by the database server, which performs logical processing services for system data. This layer mainly receives various data requests from the Web server. The user data request sent by the Web server is realized by querying, inserting, modifying, updating, deleting and other functions of the database.

3.2 Construction of a Remote Counseling Education Model for Middle School Students' Mental Health Based on Mobile Terminals

A mobile terminal or mobile communication terminal refers to a computer device that can be used on the move. Broadly speaking, it includes mobile phones, notebooks, tablet computers, POS machines and even car computers. But in most cases, it refers to mobile phones or smartphones and tablets with multiple application functions. With the development of network and technology in the direction of more and more broadband, the mobile communication industry will move towards the real mobile information age. On the other hand, with the rapid development of integrated circuit technology, the processing capability of the mobile terminal has already possessed a powerful processing capability. Mobile terminals are changing from a simple call tool to a comprehensive information processing platform. This also adds a broader development space to the mobile terminal. Therefore, the system designed in this paper is based on the mobile terminal, and constructs a remote counseling model for middle school students' mental health. First, it is necessary to calculate the relevant indicators of the remote tutoring model, as shown in the following formula (1).

$$k = \frac{\sqrt[2]{r}}{g} \tag{1}$$

In formula (1), r represents the mobile terminal coefficient, and g represents the error factor. In order to facilitate the use of the system, a unified system home page is provided.

The home page provides system descriptions, and users enter the corresponding permission interface through identity verification. In order to ensure the protection of students' privacy and to record students' psychological files, students are required to log in before conducting psychological assessments. The student account adopts the student number, which can be easily remembered and ensure the authenticity and uniqueness of the user. At the same time, it is also convenient to retrieve the password when the password is forgotten. Teacher accounts can be divided into two types: "Teacher" and "Administrator". Users in the "Administrator" role can perform system configuration and add and modify the evaluation database, which is a role for system management. By teachers familiar with mental health education and system management. The role of "teacher" is responsible for psychological counseling, psychological question answering, designated psychological assessment and management of students' psychological files, and is held by professional mental health teachers. The mental health remote counseling model constructed based on this is shown in formula (2).

$$S = \frac{\frac{r\sqrt{C}}{g}}{k^2} \tag{2}$$

In formula (2), C represents the teaching guidance coefficient. This system uses the more commonly used mental health scales to assess the health of students with related psychological symptoms. Scales vary according to the factors of concern and target groups, and there are many types of common scales. Considering the flexibility and scalability of the system, the target system supports adding and updating of scales. In order to reduce the workload, the management authority of the scale is assigned to the "administrator" role for unified management. Some of the scales in the system are aimed at all students, while others are only aimed at students with special symptoms. The use of the scale is assigned to professional psychology teachers to specify students' use of the scale, and the system generates results after completing the assessment.

3.3 Design a Functional Module for Mental Health Remote Counseling

The system is divided into two modules: student module and teacher module. The student module provides students with the main functions of psychological knowledge learning, psychological consultation, psychological evaluation and forum communication. The teacher module can use the roles of "teacher" and "administrator" for website management, mental health knowledge management, and psychological assessment management. Personal information management module: The student's account information is uniformly assigned by the administrator role. When students need to modify personal information such as password and contact information, they can modify the settings through this function. Psychological knowledge learning module: The home page of the system provides graphic and video materials for mental health knowledge learning. At the same time, a "keyword" search function of learning materials is provided, so that students can learn relevant knowledge according to their own needs.

Psychological consultation module: Students with psychological confusion can choose online mental health teachers for one-on-one psychological consultation. This ensures the privacy of the consultation. If the mental health teacher is not online, students

can leave a message to tell the teacher their confusion, and the teacher can solve it after the teacher goes online. Online psychological assessment: The role of "teacher" can periodically issue assessment questionnaires. Students choose to answer the questionnaire. When the evaluation is completed, the system can feedback the evaluation results and suggestions according to the factors and scoring standards of the questionnaire. At the same time, the evaluation result information will be formed into a file and stored in the database, and abnormal results will be sent to the "teacher" by a system message, so as to prevent psychological problems in time.

Forum communication module: After logging in, students can post their own topics of interest or confusion, and other students can discuss topics of interest to them. Tell your own experience to fellow students who have the same experience to help each other as a team. At the same time, it can also be used as a common forum as a platform for students to communicate. System resource management module (administrator role): This module is used to: add, modify or delete student and teacher user information. Publish pictures, texts and videos of mental health knowledge learning, add and modify psychological assessment questionnaires, and manage system forums. Evaluation and result management module (teacher role): responsible for issuing the evaluation questionnaire and processing the evaluation results. The teacher role can select a questionnaire in the system and issue it to a class, grade or individual, and the results of the questionnaire will be provided to the teacher. There will be special prompts in the system for the evaluation results with problems, so that teachers can deal with them in time. Consultation problem management (teacher role): "Inquiry" is divided into two types: online consultation and message consultation. Teachers can communicate with students one-on-one online through this feature. You can also respond to student inquiries. Psychological file management (teacher role): Teachers can view students' psychological files through this function to have a comprehensive and overall understanding of specific students. In order to fully and correctly solve the students' problems.

3.4 Design Aided Teaching Database

Database is the basis of information storage and processing of mental health system, and an important part of system development and construction. The design and installation of related databases are inseparable from the development of Web applications. The system database is responsible for organizing a large amount of entity information and connections in the system with a certain data model. In addition to the usual data table design, it also includes user-defined functions, views, and stored procedures. The correct installation of the database is the premise to ensure the smooth running of the web application. The system database is mainly used to realize the following functions:

Record management user information of different roles is used for authentication when logging in; the system can store mental health learning materials. Record students' consultation messages and teachers' responses. Record forum messages and reply records. Store the psychological assessment questionnaire, and you can add, modify, and delete various information in the questionnaire. Record the question attribution assessment questionnaire and attribution factor information, and the question answer option score is used to calculate the assessment result. Stores a history of student assessments.

Among them, mental health assessment is the core of system data design. Mental health assessment mostly consists of a set of relatively independent questionnaires. The questionnaire may be designed to evaluate N aspects (factors) of psychological problems, and the questionnaires belong to these N aspects respectively. The respondents fill in and complete the questionnaire within the specified time, and the total score of the questionnaire belonging to N aspects is the mental health status of the corresponding aspect. The total score of each aspect has an upper and lower limit to judge the degree of mental health in this aspect. Such as: "Symptoms self-rating scale (SCL-90)", the questionnaire includes depression, anxiety, hostility, somatic, obsessive-compulsive symptoms, interpersonal sensitivity, fear, paranoia, psychosis and other 9 symptom factors. The student user information table is used to store the basic information of students, including: student ID, name, password, gender, date of birth, enrollment time, class, major, place of origin, etc. It is used for system authentication, storage and query of student information, because the two roles of "teacher" and "administrator" in the system are both the responsibility of the teacher. The two roles have common features but different permissions, so the two roles "Teacher" and "Administrator" share this table. This table includes: serial number, password, user type, name, email, QQ number and other fields. Different roles are identified through the "User Type" field when logging in.

4 System Test

In order to verify the educational effect of the designed remote counseling education system for middle school students' mental health. In this paper, a test platform that meets the test requirements is built, and the system test is carried out, as follows.

4.1 Test Preparation

Thorough software testing is necessary to ensure the correctness and stability of the system. Software testing is a complex and difficult process that requires a lot of manpower and time. Through testing, it is found that there are many related error processing information in the software, which improves the correctness and reliability of the system, thereby improving the product quality of the software. Software testing is playing an increasingly important role. Effective software testing under limited conditions is a critical issue for system success or failure. To carry out effective system testing, correct methods and adequate preparation should be adopted. The designed system testing environment is shown in Table 1 below.

It can be seen from Table 1 that test whether the style of the user interface meets the design requirements, the aesthetics of the page, the correctness of the text, the friendliness of the operation interface and so on. To ensure that the user interface gets the actual results that are consistent with the expected results: user interface testing. Mainly by testing the functions of the user interface to ensure the correctness of user access or browsing functions, and the ease of operation. It specifically includes tests on menus, dialog boxes, and all buttons, text, prompt information, and help information on the form. For example, whether the buttons on the form are aligned, the font size of the characters, the location of the icons, and so on. In this process, in order to save manpower, time

Table 1. System test environment

Type	Environment
Server hardware	CPU Intel Core 2.50 GHz
Server operating system	Microsoft Windows
Develop and debug software	Microsoft Visual Studio
Database software	SQL Server
Client software and hardware	Window XP

or hardware resources and improve test efficiency, the concept of automated testing was introduced. The login page of the middle school students' mental health distance counseling education system is shown in Fig. 4.

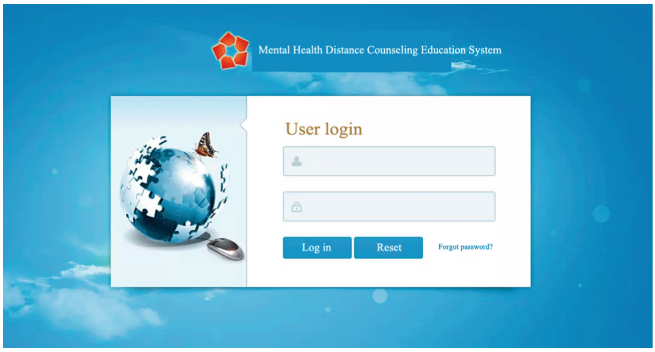

Fig. 4. System user login page

Completing the programming according to the design plan and testing. The first is to conduct code testing to test whether the code of each part of the website is normal. Whether the website can be opened normally and whether the browsing speed has achieved the expected effect. The second is to carry out functional testing, and test the functions of each module one by one to see if all the functions are implemented as required. Again, backup and test the database to see if the system can ensure data security. This system adopts the test idea from small to large, and from inside to outside, step by step. The specific process steps of the test are as follows:

Unit Testing: Unit testing is the smallest granularity, with the purpose of ensuring that each module or component works correctly. The white box testing method is mainly used, and the main test is whether the internal structure of the unit is correct. Integration testing: Integration testing connects these two tests after unit testing and before system testing. On the basis of unit testing, black-box testing is used to assemble the tested modules for integration testing. The purpose is to check the problems between the modules related to the interface and ensure the overall function between the units. The point of integration testing is to find out the invocation and parameter matching problems between unit

modules. Exclude the amplification of errors between modules caused by a unit error, and the mismatch of parameter types and quantities. Verify the role of public variables on each integration test module, etc. System test: System test is a comprehensive test of the system under the actual application of the system running in the required server, software and hardware environment of related software. System testing usually uses a black-box approach to verify that the system works in harmony with the actual environment. System testing can reflect whether the system as a whole is suitable for the design function, and whether it can achieve the system goals in the designed software and hardware environment.

4.2 Test Results and Discussion

In the above test environment, design a login test case for system access rights. A test data sample is designed, and the role of "administrator" and "teacher" is used to release information, add questionnaires, and designate assessments to test the designed mental health distance counseling education system. Test the system feedback time when different numbers of users log in, and the test results are shown in Table 2 below.

Table 2. System test results

Number of logged in users	System feedback time	Standard feedback time	Test results
10	0.51 s	<1 s	Pass
50	0.56 s	<1.5 s	Pass
100	0.59 s	<2 s	Pass
150	0.61 s	<2.5 s	Pass
200	0.69 s	<3 s	Pass
500	0.71 s	<3.5 s	Pass
1000	0.82 s	<4 s	Pass

It can be seen from Table 2 that the designed remote counseling education system for middle school students' mental health has good performance and short feedback time. The method is reliable and has certain application value.

In order to further verify the practical application performance of the system in this paper, in the above experimental environment, the coverage rate of sentences related to mental health problems detected by the system is tested. The minimum statement coverage rate should not be less than 80%, and the test case execution coverage rate should reach 100% as indicators. The formula for calculating statement coverage is:

$$P_1 = \frac{M}{N} \times 100\% \tag{3}$$

In formula (3), M represents the number of sentences to be evaluated. N represents the total number of executable statements. The three system statement coverage ratios are used respectively, and the comparison results are shown in Table 3.

Comparing the system and the actual statement coverage in this paper, the results are shown in Table 3.

Table 3. Statement coverage comparison

Statement	This article system	The actual situation
Sequence 1	150 executable statements out of 150 statements with 100% statement coverage	150 executable statements out of 150 statements with 100% statement coverage
Sequence 2	75 of the 85 statements are executable, and the statement coverage is 88.2%	75 of the 85 statements are executable, and the statement coverage is 88.2%
Sequence 3	200 executable statements out of 200 statements with 100% statement coverage	200 executable statements out of 200 statements with 100% statement coverage
Sequence 4	150 executable statements out of 180 statements, with a statement coverage rate of 83.3%	150 executable statements out of 180 statements, with a statement coverage rate of 83.3%

It can be seen from Table 3 that the statement coverage rate of the system in this paper is higher than the minimum standard of 80%, and the maximum coverage rate can reach 100%. It is also consistent with the actual situation.

5 Conclusion

Mental health education for middle school students is not only an objective requirement to improve the effect of middle school students' ideological and political education, but also an important measure to further strengthen and improve middle school students' ideological and political education. Due to the complexity of the international situation and the increasing independence, selectivity, variability and difference of people's ideological activities brought about by domestic social and economic development, a single preaching-style ideological and political education has been unable to meet the requirements of the times. Must use a combination of methods to improve the effect of ideological and political education. We propose a remote counseling education system for middle school students' mental health based on mobile terminals. The hardware part designs time counter and memory. The memory uses faster storage performance, which improves the performance of the system. In the software part, the relevant indicators of the remote tutoring model are calculated, and the remote tutoring function module is designed to assist the teaching database, so that the results of psychological calculation are more accurate. The experimental results show that the feedback time of the system designed in this paper is shorter and the sentence coverage rate is higher. It can realize fast, effective and stable remote counseling of middle school students' mental health.

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