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Digital Transformation of College Students' Mental Health Education in the Intelligent Era: Model Innovation and Practical Exploration

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Abstract: *In the context of the intelligent era, college students' mental health issues show new trends due to information overload, dependence on virtual social interactions, and intensified employment pressure. The traditional mental health education model is difficult to meet the needs due to limitations such as narrow coverage, weak interactivity, and low efficiency. Promoting digital transformation has become an inevitable choice. Based on the theoretical framework of digital empowerment theory and mental health education theory, this paper explores from two dimensions: model innovation and practical paths. It constructs a hierarchical and distributed digital platform (including user management, course resources, psychological assessment and other modules), integrates online and offline courses, case databases, knowledge base resources, and develops new resources such as multimedia courses, virtual simulation experiments and mobile applications. It innovates big data personalized teaching, AI interactive teaching, VR experiential teaching methods to improve the accuracy and participation of education. The practical paths include technology research and development and integration, data security protection, improvement of teachers' digital literacy and enhancement of students' cognition. The research shows that digital transformation breaks through the limitations of time and space through technology empowerment, realizes resource sharing, precise intervention and efficient services, and provides a feasible solution for the high-quality development of college students' mental health education.*

Keywords: *Intelligent Era, College Students' Mental Health Education, Digital Transformation, Model Innovation, Practical Paths*

1. Introduction

In today's intelligent era, the digital wave is sweeping the world at an unprecedented speed, profoundly changing people's lifestyles, learning methods and working patterns[1]. The field of education is inevitably impacted by this wave, and digital transformation has become an inevitable trend in educational development. At the same time, college students' mental health problems have become increasingly prominent[2-5], attracting widespread attention from all sectors of society. Relevant studies have shown that the incidence of college students' mental health problems has been on the rise in recent years. Factors such as academic pressure, employment competition, interpersonal relationships, and emotional distress have brought huge challenges to college students' mental health. These problems not only affect the quality of college students' study and life, but also have an adverse impact on their future development. The traditional mental health education model has gradually revealed its limitations in dealing with these problems. For example, the educational methods are relatively single, mainly focusing on classroom teaching and individual counseling, which are difficult to meet the diverse needs of students;the distribution of educational resources is uneven, and some colleges and universities in remote areas or with small scales have relatively scarce mental health education resources; the evaluation of educational effects is not accurate enough, making it difficult to accurately grasp students' psychological status and educational effects[6].

In this context, introducing digital technology into college students' mental health education and realizing the digital transformation of mental health education has important practical significance. On the one hand, digital technology can provide richer resources and diversified teaching methods for mental

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health education[7]. Through the Internet, students can obtain massive amounts of mental health knowledge, cases, videos and other resources for learning anytime and anywhere. The application of virtual reality (VR), augmented reality (AR) and other technologies can also create more real and vivid psychological experience scenarios for students, improving the attractiveness and effectiveness of mental health education. On the other hand, digital technology can realize the personalization and precision of mental health education[8]. Through big data analysis, we can understand students' psychological characteristics, needs and problems, formulate personalized educational plans for each student, and provide precise psychological support and intervention. In addition, digital technology can break the limitations of time and space, realize full coverage of mental health education, and benefit more students.

2. Necessity of Digital Transformation of College Students' Mental Health Education in the Intelligent Era

2.1 New Trends of College Students' Mental Health Problems in the Intelligent Era

The intelligent era has profoundly reshaped college students' living and learning environments, posing new mental health challenges with distinct trends[9]. Amid information explosion, students are inundated with massive data daily via the Internet and social media—while this broadens their horizons, it also creates overload. Sorting through information drains time and energy, triggering issues like distraction, anxiety, and depression, and exposure to harmful content (false news, violence) can distort values and cause trauma.

Virtual socialization, enabled by platforms like WeChat and Douyin, has altered interpersonal dynamics. Though convenient, its anonymity fosters behaviors like cyberbullying, and over-reliance erodes real-world social skills, increasing loneliness and social anxiety. Escalating employment pressure[10], with 11.79 million 2024 graduates, intensifies stress, leading to anxiety or self-denial. Additionally, fast-paced life, fragmented routines from smart devices, and emerging issues like Internet addiction further heighten psychological strain among students.

2.2 Limitations of Traditional Mental Health Education Models

Although the traditional college students' mental health education model has effectively maintained students' psychology[11], it has gradually shown limitations in the context of the intelligent era. Firstly, the coverage is narrow and the accuracy is insufficient. The traditional model mainly focuses on classroom teaching, lectures and individual counseling. Classroom teaching and lectures can only cover some students due to time and space constraints, and individual counseling has a smaller service scope due to limited resources (students in remote or small-scale colleges and universities are more difficult to obtain support). At the same time, the unified teaching content is difficult to adapt to individual differences, classroom teaching cannot be adjusted according to the syllabus, and counseling lacks effective evaluation tools, making it difficult to accurately meet diverse needs. Secondly, weak interactivity and low efficiency coexist. The traditional model is mainly based on one-way teaching, with students passively accepting knowledge and insufficient interaction. Individual counseling is limited by time and environment, with limited depth, and lacks peer communication support. In addition, organizing classes and lectures requires a lot of human and material resources, and counseling requires multiple appointments and waiting, resulting in low efficiency. The evaluation of educational effects relies on subjective judgment, making it difficult to dynamically adjust strategies and limiting the effectiveness of education.

2.3 The Important Value of Digital Transformation for College Students' Mental Health Education

Facing the new trends of mental health problems and the limitations of traditional models in the intelligent era, digital transformation has key value for mental health education[12]. Firstly, technology empowerment improves accuracy and channel coverage. Big data analyzes learning, social and other behavioral data, establishes personalized psychological files for students, and combines AI for real-time monitoring and early warning to achieve precise intervention. Technologies such as the Internet, VR/AR expand educational channels - students can obtain courses, counseling and other resources through online platforms and mobile applications at any time, and virtual scenes further enhance the attractiveness and effectiveness of learning. Secondly, both interactivity and efficiency are improved. Digital platforms such as online forums and multi-mode (text/voice/video) counseling support real-time interaction between teachers and students, and peers, forming a psychological mutual assistance atmosphere.

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Psychological tests, games and other activities increase participation. At the same time, the rapid sharing of resources reduces organizational costs, AI-assisted automatic replies and preliminary evaluations improve work efficiency[13], and data analysis functions help dynamically optimize educational strategies and improve quality.logical training, educational efficacy is significantly amplified.

3. Theoretical Basis for the Digital Transformation of College Students' Mental Health Education in the Intelligent Era

3.1 Connotation and Characteristics of Digital Empowerment

Digital empowerment is an extension of empowerment theory in the information age[14]. Its essence lies in using digital technologies to endow individuals or organizations with knowledge, information, and resources to enhance their capabilities and competitiveness. In the field of education, its core is to leverage technologies such as the internet, big data, and artificial intelligence to create rich, efficient, and personalized learning experiences and services. Digital empowerment has four major characteristics: innovation, efficiency, personalization, and intelligence. Technologies like cloud computing, big data, and VR/AR break through the limitations of time and space in traditional education (e.g., online course platforms and immersive learning scenarios stimulate innovative thinking). Digital technologies accelerate the transmission and processing of information (psychological health education resources spread rapidly, and big data analysis helps with problem early warning). Based on multi-dimensional data of learning behavior and psychological characteristics, personalized education content and intervention programs are accurately provided. Artificial intelligence technologies enable intelligent analysis, recommendation, and consulting services (e.g., intelligent robots answer psychological questions, and evaluation systems automatically provide early warnings). These digital technologies comprehensively improve the pertinence and efficiency of education, creating richer, more efficient, and personalized learning experiences and educational services for students.

3.2 Theoretical Framework of Mental Health Education

Mental health education seeks to enhance individuals' mental well-being and mitigate mental health issues through systematic education and interventions, drawing on diverse theoretical foundations. Health psychology theory conceptualizes mental health as dynamic and multi-layered, emphasizing not just alleviating disorders but fostering positive traits like self-awareness and emotional management, with links to lifestyle, environment, and psychological states. In college settings, this translates to addressing students' issues while nurturing optimism and resilience to build healthy coping skills. Social cognitive theory highlights cultivating self-cognition, self-management, and social adaptability, positing that behaviors are learned through observation and cognition-behavior interactions[15-16]. Educators apply this by guiding students to adopt successful strategies via social learning and practice, refining their abilities through real-world engagement.

The key of the model of mental health education (including social support, cognitive behavioral and psychological education methods) lies in the cooperation between educators and students. The social support model strengthens networks involving family, school, and society to buffer stress; the cognitive-behavioral model adjusts emotions by modifying thought and behavior patterns; and the psychological education model focuses on imparting knowledge to boost self-care awareness. Together, these theories and models provide a framework for comprehensive, targeted mental health education.

3.3 The Convergence Point of Digital Empowerment and Mental Health Education

Digital empowerment and college students' mental health education are deeply integrated in personalized education and data analysis intervention[17]. Based on students' personalities, needs and psychological status, digital technology accurately pushes personalized resources by analyzing behavioral data such as learning and social interaction (for example, pushing emotional management courses for anxious students and providing communication skills materials for those with interpersonal troubles). At the same time, big data establishes a mental health database, mines data such as academic performance and social frequency, timely warns of potential psychological problems and arranges professional intervention. In addition, it can also promote information sharing and convenient counseling. Digital platforms break the limitations of time and space, allowing students to obtain resources such as lecture videos and test scales, and communicate and help each other through online forums and social media groups, forming a psychological support atmosphere. Online counseling services

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(text/voice/video)meet diverse needs, and intelligent psychological counseling robots provide 24-hour preliminary answers to improve service efficiency.

4. Practical Significance of Integrating Ideological and Political Education with Psychological Education

4.1 Construction of Digital Mental Health Education Platform

The digital mental health education platform adopts a hierarchical and distributed architecture to ensure stable, scalable and efficient operation of the system[18]. The bottom layer is the infrastructure layer, which includes hardware resources such as servers, storage and networks. It realizes hardware virtualization and elastic allocation through cloud computing, dynamically allocates computing and storage resources, improves utilization and reduces costs. The platform layer is the core, covering middleware, database management systems (a combination of relational and non-relational to adapt to structured and unstructured data storage) and application servers, supporting data management and system operation.

The application layer, as the user interaction interface, integrates multi-module functions. The user management module ensures identity security through multiple authentication methods (account password, SMS verification code, etc.) and assigns permissions according to roles (students can learn, evaluate and make appointments; teachers can manage courses and counsel students; managers are responsible for system configuration and data analysis). The course resource module integrates various types of courses (videos, e-textbooks, cases, etc.), covering basic psychology, emotional management and other contents, classified by theme and supporting online/offline learning to meet diverse needs.

Functional modules strengthen service and analysis capabilities. The psychological assessment module provides professional scales (such as SCL-90, SAS, etc.), automatically generates reports and records results in psychological files, and supports regular census to warn of potential problems. The counseling service module supports one-on-one counseling in multiple ways (text/voice/video), records the whole process and provides appointment functions. The data analysis module mines learning behavior, assessment and counseling data, analyzes learning needs and psychological dynamics, generates visual reports, and provides a basis for personalized teaching and intervention decisions[19]. Resources and storage resources improve resource utilization and reduce operating costs.

4.2 Integration and Development of Digital Mental Health Education Resources

4.2.1 Integration of Existing Mental Health Education Resources

When integrating existing mental health education resources, it is necessary to comprehensively sort out various online and offline resources to achieve organic integration and efficient utilization. The online courses include high-quality mental health education courses from well-known domestic and foreign universities, educational institutions, and professional mental health platforms. These courses cover a wide range of topics, such as basic psychology, developmental psychology, social psychology, abnormal psychology, and psychological counseling and therapy. The right to use these courses can be obtained through negotiations and cooperation with the course providers and integrated into the digital platform. Then the platform classifies and organizes the courses, marking them based on dimensions such as difficulty level, target audience, and course duration, making it convenient for students to quickly search for and study according to their own needs. Meanwhile, the platform encourages students to evaluate and offer suggestions on the courses they have taken by establishing a course evaluation and feedback mechanism, continuously optimizing course resources.

The integration of case databases is a crucial link. Practical cases related to psychological counseling and crisis intervention are collected (from sources such as school counseling centers, professional institutions, and academic research). These cases are classified by problem type (e.g., academic, interpersonal, emotional issues) and student groups (e.g., undergraduates, postgraduates). Detailed records are made of information including background, problem manifestations, intervention processes, and effect evaluations. A keyword retrieval system is established to help students and teachers learn coping methods. The integration of knowledge databases provides comprehensive knowledge support. It gathers content such as professional psychological knowledge, popular science articles, and adjustment skills, and invites experts to write authoritative interpretations. Knowledge content is processed structurally and a knowledge graph is built (divided into sections such as mental health basics, common

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problems, and adjustment methods), with associated subdivided knowledge points. An intelligent question-answering system is developed using AI to quickly answer questions encountered in the learning process[20].

4.2.2 Development of New Digital Mental Health Education Resources

Developing multimedia courses is an important measure to enrich digital mental health education resources[21]. Combining the learning characteristics and needs of students in the intelligent era, advanced multimedia technologies are employed to create vivid, interesting, and engaging mental health education courses. Professional psychology teachers and multimedia production teams are invited to collaborate to ensure the professionalism of course content and the effectiveness of teaching methods. Virtual reality (VR) and augmented reality (AR) technologies are adopted to develop immersive mental health education courses, enabling students to experience psychological scenarios firsthand and improve learning outcomes. Virtual simulation experiments provide students with opportunities to engage in psychological practice in a virtual environment, helping to deepen their understanding and application of mental health knowledge. A series of virtual simulation experiment projects related to mental health education are developed, such as psychological counseling simulation experiments, psychological therapy technology practice experiments, and psychological assessment operation experiments. In psychological counseling simulation experiments, students can play the roles of counselors and clients, and go through the entire process of psychological counseling in a virtual scenario, including relationship building, information collection, problem assessment, plan formulation, and intervention implementation. The system provides real-time feedback and guidance based on students' performance to help them continuously improve their counseling skills. Virtual simulation technology is used to simulate various psychological problem scenarios, allowing students to conduct training in observing, analyzing, and solving problems in a virtual environment, thereby cultivating their practical operation abilities and capabilities to deal with complex psychological issues.

The development of mobile applications facilitates students' access to mental health education resources and services anytime and anywhere. A fully functional and user-friendly mental health education mobile application is designed, covering functional modules such as course learning, psychological assessment, counseling appointment, knowledge push, and community interaction. The course learning module provides rich online course resources, supporting multiple learning methods such as video playback, audio listening, and text reading, allowing students to learn independently according to their own time and preferences. The psychological assessment module offers a variety of professional psychological assessment scales, enabling students to easily complete assessments on their mobile phones and obtain assessment results and analysis reports instantly. The counseling appointment module allows students to make online appointments with psychologists and choose suitable counseling methods (such as text counseling, voice counseling, or video counseling). The knowledge push module delivers personalized mental health knowledge and information to students based on their learning situation and interests, such as popular science articles on mental health, psychological adjustment skills, and notifications of mental health activities. The community interaction module provides a platform for students to communicate and share, where they can post their psychological confusions, experiences, and insights, interact with other students, and obtain support and suggestions. Leveraging the convenience of mobile applications, a mental health monitoring function is developed to collect students' daily behavior data (such as sleep patterns, exercise habits, and social activities) through mobile phone sensors, analyze changes in students' mental states[22], and promptly detect potential psychological problems for early warning.

4.3 Innovation in Digital Mental Health Education Teaching Methods

4.3.1 Personalized Teaching Based on Big Data

The key to personalized teaching based on big data lies in fully exploring and utilizing multi-source information such as students' learning data and psychological data to achieve precise teaching and personalized guidance. In the intelligent era, every learning behavior of students on the digital mental health education platform, such as course learning progress, video viewing duration, frequency and content of participation in discussions, and completion of assignments and tests, is recorded in detail by the platform. Meanwhile, students' psychological assessment results, counseling records, and daily behavior data (such as social media usage habits, exercise frequency, and sleep quality) are also integrated into the big data analysis system.

Through the analysis of these massive amounts of data, students' learning portraits and psychological

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portraits are established. Learning portraits depict students' characteristics in terms of learning interests, learning styles, and knowledge mastery. For example, if a student frequently watches course videos on interpersonal relationships on the mental health education platform, actively participates in relevant discussions, and performs well in tests on this topic, it can be inferred that the student has a strong interest in mental health knowledge in the field of interpersonal relationships and has a good grasp of it. Psychological portraits, on the other hand, reflect students' mental health status, tendencies towards psychological problems, and emotional stability. By analyzing students' psychological assessment data, such as scores from the Self-Rating Anxiety Scale (SAS) and Self-Rating Depression Scale (SDS), as well as problems and troubles mentioned in counseling records, we can understand whether students have psychological problems such as anxiety and depression, and the severity of these problems[23].

Based on students' learning portraits (interests, knowledge mastery) and psychological portraits (problem tendencies), the system customizes personalized plans for students, and extended materials according to learning interests (such as the field of interpersonal relationships), adjust teaching difficulty and progress based on knowledge mastery, and automatically push review materials and targeted exercises for weak knowledge points; for students with tendencies towards psychological problems (such as those with anxiety), recommend courses and arrange regular counseling by psychologists (such as relaxation training and cognitive-behavioral therapy). Teachers analyze the overall learning and psychological status of the class through big data, adjust teaching strategies (such as focusing on explaining common difficulties and increasing interaction), and solve individual problems in a targeted manner to improve teaching quality.

4.3.2 Interactive Teaching Based on Artificial Intelligence

Leveraging artificial intelligence for interactive teaching significantly enhances students' learning experience and engagement, fostering active and in-depth learning[24]. Intelligent teaching aids, particularly AI teaching assistant robots, play versatile roles in both classroom and online settings. In classrooms, they real-time record and transcribe lectures and student questions for post-class review, while addressing queries instantly via natural language processing escalating complex issues to teachers or psychologists. In online learning, these robots offer personalized guidance, recommend relevant knowledge, cases, and readings based on students' progress, and stimulate discussion on mental health topics to encourage idea exchange.

A key component is the intelligent feedback and evaluation system, which monitors and assesses learning processes and outcomes in real time. It auto-grades psychological assessments, assignments, and exams, providing detailed reports—including mental health evaluations with personalized advice and targeted review suggestions for academic tasks. By analyzing learning behaviors like study duration and interaction frequency, it identifies disengagement, sends reminders, and offers incentives to boost motivation. Teachers use this data to adjust strategies, ensuring more tailored guidance.

4.3.3 Experiential Teaching Based on Virtual Reality

The use of virtual reality technology for experiential teaching creates an immersive learning environment for students, allowing them to personally experience various mental health problems and coping methods in virtual scenarios, thereby improving their mental health awareness and coping abilities. In mental health education, virtual reality technology is used to develop various simulation scenarios, such as social anxiety scenarios, test anxiety scenarios, and workplace pressure scenarios. In the social anxiety scenario, after wearing virtual reality equipment, students seem to be in a lively social occasion, with many people communicating and interacting around them. Students need to try to communicate and interact with others in this scenario, experiencing emotions such as tension and anxiety caused by social anxiety. By simulating different social situations and coping styles, students are helped to gradually overcome social anxiety and improve their social skills. In the test anxiety scenario, students enter a virtual examination room environment, face the upcoming exam, and feel the psychological and physical reactions caused by exam pressure.

5. Construction of Practical Paths for the Digital Transformation of College Students' Mental Health Education in the Intelligent Era

5.1 Strengthening Technology Research and Development and Application

To promote the digital transformation of college students' mental health education in the intelligent era, investment in technology research and development should be increased[25]. Colleges and

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universities, research institutions, and relevant enterprises need to work together to develop advanced technologies suitable for the field of mental health education. In the research and development of big data analysis technology, efforts should be made to improve the accuracy of data mining and analysis to gain a deeper insight into students' psychological characteristics and behavioral patterns. Algorithms that can accurately identify key information related to mental health from massive amounts of students' learning, life, and social data should be developed. For example, by analyzing students' online social behavior data, their interpersonal relationship status and emotional state can be accurately judged.

It is also necessary to promote the in-depth integration of technology and mental health education. On the one hand, artificial intelligence technology is used to realize intelligent and personalized psychological assessment[26]. An intelligent psychological assessment system is developed, which can adjust the difficulty and type of questions in real-time according to students' answers, so as to more accurately assess their mental health status. Combined with virtual reality (VR) and augmented reality (AR) technologies, immersive mental health education courses and counseling environments are created. VR-based simulation courses for psychological counseling scenarios are developed, allowing students to experience different psychological problem scenarios in a virtual environment and learn corresponding coping strategies, thereby enhancing their learning experience and practical ability. On the other hand, blockchain technology is used to ensure the security and immutability of mental health education data, providing reliable guarantees for data storage and transmission.

Promoting technological innovation is also crucial. Researchers are encouraged to carry out research on cutting-edge technologies and explore the application possibilities of new technologies in mental health education. For example, research on the application of brain-computer interface technology in mental health monitoring and intervention can be conducted to understand students' mental states in real-time by monitoring their brain activity signals, providing a more accurate basis for personalized psychological intervention. Existing technologies are continuously optimized to improve their stability and usability, so that they can better serve the digital transformation of college students' mental health education.

5.2 Improving Data Security and Privacy Protection Mechanisms

Establishing and improving data security management systems is the key to ensuring the digital transformation of college students' mental health education[27]. Colleges and universities should formulate strict norms for data collection, storage, use, and sharing, and clarify the responsible persons and operation procedures for each link of data management. In the data collection link, the principle of minimum necessity should be followed, and only student data related to mental health education should be collected to avoid excessive collection. The methods and locations of data storage should be clearly specified, and encrypted storage technology should be adopted to ensure data security. Sensitive data such as students' psychological assessment results and counseling records should be encrypted and stored in secure servers to prevent illegal access to data. In terms of data use and sharing, access to data should be strictly restricted. Only authorized personnel can access and use relevant data, and data sharing must go through strict approval procedures to ensure that data is not misused.

It is essential to adopt advanced encryption technologies to protect students' mental health data[28]. In the process of data transmission, encryption protocols such as SSL/TLS are used to encrypt data, preventing data from being stolen or tampered with during network transmission. In data storage, a combination of symmetric encryption and asymmetric encryption is used to encrypt data. Symmetric encryption is used for fast encryption and decryption of data to improve data processing efficiency; asymmetric encryption is used to encrypt symmetric encryption keys to ensure the security of keys. Encryption keys are updated regularly to enhance data security.

Strengthening supervision over data security cannot be ignored. Colleges and universities should set up special data security management teams responsible for supervising and inspecting the implementation of data security management systems. Regular security vulnerability scans should be conducted on data storage and transmission systems to promptly discover and repair security vulnerabilities. A data security emergency response mechanism should be established. In the event of data leakage and other security incidents, measures can be taken quickly to handle them and reduce losses. Training and management of data users should be strengthened to improve their data security awareness and operational norms, preventing data security problems caused by human factors.

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5.3 Enhancing Teachers' Digital Literacy and Ability

Carrying out diversified teacher training is an important way to improve teachers' digital literacy and ability. Colleges and universities should regularly organize mental health education teachers to participate in digital technology training courses, including training on big data analysis, artificial intelligence application, and the use of online teaching platforms. Technical experts and representatives of successful cases of digital transformation in the education field are invited to give lectures and share experiences, enabling teachers to understand the latest development trends and application cases of digital technologies and broaden their horizons. Practical operation opportunities are provided to allow teachers to apply the learned digital technologies in actual projects and improve their practical operation ability. Teachers are organized to participate in the construction and maintenance of digital mental health education platforms, enabling them to master the use and management skills of the platform in practice.

Establishing an effective incentive mechanism can fully mobilize teachers' enthusiasm to improve their digital literacy. Colleges and universities can incorporate teachers' digital teaching ability and achievements into the performance appraisal system, and reward teachers who have performed well in digital mental health education, such as selecting excellent teachers, adding points for professional title promotion, and providing bonus incentives. Special research funds are set up to support teachers in carrying out research projects related to digital mental health education, encouraging them to explore and innovate digital teaching methods and models. Corresponding rewards and recognition are given to teachers' research achievements in digital teaching, such as published papers and developed teaching software.

Promoting cooperation and communication among teachers also helps to improve their digital literacy and ability [29]. Colleges and universities can establish digital teaching communication platforms for teachers, such as online forums and workshops, allowing teachers to share digital teaching experiences, exchange problems encountered and solutions on the platform. Teacher teams are organized to carry out cooperative projects on digital mental health education. Through team cooperation, teachers' respective advantages are brought into play, and their digital teaching ability is improved together. Teachers are encouraged to communicate and cooperate with peers from other colleges and universities and research institutions, and participate in academic conferences and seminars to understand the latest research results and practical experiences in the industry, promoting teachers' professional growth.

5.4 Enhancing Students' Cognition and Acceptance of Digital Mental Health Education

Strengthening publicity and promotion work to improve students' cognition of digital mental health education. Colleges and universities can carry out publicity through various channels, using traditional media such as campus radio, bulletin boards, and school newspapers, as well as new media platforms such as WeChat official accounts, Weibo, and Douyin, to publicize the advantages, contents, and services of digital mental health education. Vivid and interesting promotional videos and graphic materials are produced to introduce the functions and usage methods of the digital mental health education platform, enabling students to understand what help digital mental health education can provide them. Digital mental health education publicity weeks or months are held, and online and offline publicity activities are carried out, such as mental health knowledge lectures, psychological test experiences, and counseling service displays, to attract students' attention and participation, and enhance their understanding and awareness of digital mental health education[30].

Carrying out students' digital literacy training to improve their ability to use digital mental health education resources. Colleges and universities can offer special digital literacy courses, incorporate the use of digital mental health education resources into the course content, and teach students how to use the digital mental health education platform for learning, assessment, and counseling. Students are organized to participate in digital mental health education practice activities, such as online surveys and group discussions on mental health topics, allowing them to become familiar with the use of digital tools in practice and improve their operational skills. For students with low information literacy, personalized counseling and support are provided to help them overcome difficulties in using digital resources and enhance their confidence and acceptance of digital mental health education.

Continuously optimizing the user experience of the digital mental health education platform is also key to enhancing students' acceptance. In terms of interface design, attention should be paid to simplicity, beauty, and ease of operation, in line with students' usage habits and aesthetic needs. Intuitive icons and menus are adopted to facilitate students to quickly find the required functions. In terms of function settings, the platform functions should be continuously optimized and improved according to students'

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feedback and needs to improve the stability and response speed of the platform. The interactivity and interestingness of the platform are increased, and some mental health mini-games and interactive communities are designed to attract students to actively participate. The personalized recommendation function of the platform is strengthened, and personalized mental health education resources are pushed to students according to their interests and needs to improve their learning effects and satisfaction.

6. Summary and Outlook

In the context of the intelligent era, college students' mental health education is facing new challenges such as information overload, dependence on virtual social interactions, and intensified employment pressure. The traditional model has been difficult to meet the needs due to limitations such as narrow coverage, weak interactivity, and low efficiency. Digital transformation has injected new impetus into mental health education through technological empowerment: the hierarchical distributed platform architecture ensures stable and efficient system operation; the integration and development of resources (online and offline courses, case databases, knowledge bases, multimedia/virtual simulation resources) enrich the supply; innovative methods such as big data personalized teaching, AI interactive teaching, and VR experiential teaching improve accuracy and participation; at the same time, practical paths such as technology research and development, data security, improvement of teachers' literacy, and enhancement of students' cognition provide all-round support for the transformation. Overall, digital transformation has effectively broken through the limitations of time and space, realized resource sharing, precise intervention, and efficient services, laying a solid foundation for the high-quality development of college students' mental health education. In the future, the digital transformation of college students' mental health education can be deepened in the following directions: First, further upgrade technology integration, explore the application of cutting-edge.

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