Application of Cultivating Medical Students' Humanistic Sentiments in Professional Courses in the Digital Background: An Initial Exploration

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Abstract: Cultivating humanistic sentiments in medical students is crucial for training high-quality medical professionals. Currently, education at various levels, from secondary vocational, higher vocational, undergraduate to graduate, often adopts single-form methods with limited effectiveness in cultivating humanistic sentiments. In the digital background, applying digital software to integrate the cultivation of humanistic education into professional courses can enhance students' humanistic sentiments. This project aims to construct a reasonable, comprehensive, and experiential teaching model suitable for medical students.

Keywords: Digital Background; Medical Students; Humanistic Sentiments; Professional Courses

1. Introduction

In recent years, the importance of medical humanities education has been increasingly recognized in China, with continuous improvements in related policies and support measures. For example, the Ministry of Education and five other departments jointly issued the "Opinions on Deepening Clinical Talent Training Reform through Medical-Education Collaboration," which explicitly emphasizes the need to strengthen medical humanities education and professional quality training. Medical schools are actively exploring new models and methods for medical humanities education, such as offering humanities courses, conducting social practices, and implementing mentorship systems. Internationally, over the past two decades, countries like the UK, the US, and Australia have established professional organizations to promote medical humanities education, such as the "American Society for Bioethics and Humanities," the "British Medical Humanities Association," and the "Australasian Association for Medical Humanities." Medical humanities have become mainstream in medical education in North America and the UK, with a growing trend towards expanding medical humanities education.

2.The Importance of Humanistic Sentiments in Medical Students

Humanistic sentiments in medical students refer to the deep understanding and active practice of medical ethics, patient care, social responsibility, and other aspects formed during their medical education. These sentiments are reflected not only in their professional knowledge and skills but also in the moral qualities, emotional care, and aesthetic pursuits they demonstrate when dealing with patients. Cultivating humanistic sentiments in medical students is of great significance in medical education, as it helps improve the quality of medical services and build harmonious doctor-patient relationships. During the COVID-19 pandemic, numerous heroes and frontline workers emerged, exemplifying profound humanistic sentiments. With the rapid development of technology, the digital era has deeply penetrated all aspects of society, including the field of medical education. Against this background, the education and training model for medical students is undergoing profound changes. The cultivation of humanistic sentiments in medical students has become particularly important, as it directly affects the quality of their future medical practice and patient satisfaction.

3.Analysis of the Current Status of Humanistic Sentiments Cultivation in Different Levels of Medical Schools

3.1The Current Status of Cultivating Humanistic Sentiments in Secondary Vocational Medical Students

3.1.1Young Age and Weak Learning Ability

Students in secondary vocational schools are mostly middle school graduates, generally younger in age. They need to study medical professional courses while completing the compulsory education mandated by the state. Their theoretical learning abilities are insufficient, making it difficult to cultivate humanistic sentiments [2]. Secondary vocational medical schools focus on skill and technical training, with students having strong practical abilities, numerous professional courses, and heavy academic pressure. However, there are relatively few courses on humanistic literacy, resulting in poor integration. Additionally, ideological and political courses are often taught by non-medical professionals, leading to a disconnection between professional and ideological courses, thus hindering systematic cultivation.

3.1.2Dissatisfaction with Humanistic Courses and Environment

Research has found that some secondary vocational students have high expectations and recognition for humanistic literacy courses but are dissatisfied with the currently offered humanistic courses and environments. Influenced by traditional teaching methods, medical professional courses are prioritized, with almost no other humanistic literacy courses offered besides the mandatory ones required by the state. Outdated textbooks and untimely updates to course standards contribute to student dissatisfaction.

3.2The Current Status of Cultivating Humanistic Sentiments in Higher Vocational Medical Students

3.2.1Differences in Talent Training Programs and Insufficient Humanistic Literacy Courses

Vocational colleges emphasize comprehensive development with a wide range of courses. Influenced by the concepts of "emphasizing practice over theory" and "valuing skills over humanities," students have few credits for humanistic literacy courses and tend to focus more on passing exams rather than valuing the courses. Humanistic literacy courses are often taught intensively in one semester, lacking systematic cultivation, and students study for exams rather than applying what they learn.

3.2.2Weakened Humanistic Literacy Courses Due to Ideological and Political Education

Ideological and political education requires strengthening medical ethics and professionalism in medical courses, focusing on cultivating the spirit of respecting life, saving lives, selfless dedication, and boundless love. It emphasizes educating and guiding students to prioritize the safety and health of people, respect patients, communicate effectively, and enhance comprehensive qualities and humanistic literacy. However, integrating ideological and political education into basic, professional, and practical courses can lead to repetitive education, causing students to feel fatigued and indifferent towards humanistic literacy courses.

3.3The Current Status of Cultivating Humanistic Sentiments in Undergraduate Medical Students

3.3.1Emphasis on Professional Education and Insufficient Humanistic Cultivation

Five-year undergraduate students face heavy academic pressure, with foundational and professional courses focusing on theoretical knowledge and internships emphasizing professional skills training. Even after three years of standardized training post-graduation, the emphasis remains on professional theoretical knowledge and skills training, with insufficient focus on cultivating humanistic sentiments. Students lack deep experiences, making it difficult to cultivate compassionate and ethical doctors [1].

3.3.2Lack of Professional Education in Medical Humanities Post-Class Activities

Medical humanities education is integrated into campus culture but lacks systematic design and planning, failing to create a strong cultural educational atmosphere. Extracurricular social practice activities, such as summer social practice trips, are often led by non-medical teachers like youth league committee instructors, lacking professional guidance. Consequently, students' social practice remains superficial and lacks further professional understanding. Additionally, the lack of cooperation from the government and social organizations results in limited social promotion and attention, making it challenging to ensure long-term effectiveness of medical humanities education [3].

3.4 The Current Status of Cultivating Humanistic Sentiments in Medical Graduate Students

3.4.1 Graduate Education Focuses on High-Level Medical Training

In China, graduate education follows a mentorship system, where students complete research projects under their mentors' guidance. Due to this system, students have limited hours for theoretical knowledge, and humanistic literacy courses are even more lacking, leading to a focus on medicine over humanities.

3.4.2 Challenges During Three-Year Standardized Training

During the three-year standardized training period, graduate students follow clinical teachers in hospitals for research and clinical skills training. However, they often lack good doctor-patient communication skills and empathy, hindering their comprehensive development as high-level medical talents.

4. Application and Development of Digital Background in Teaching and Education

The digital background refers to the current information era where the digitization of information is increasingly valued and widely applied. Digitization has extensive applications and profound impacts across various fields. In the healthcare sector, digitization has promoted the development of telemedicine and electronic health records, enhancing diagnostic efficiency and convenience. In the education sector, digital platforms provide remote teaching and learning resources, breaking the limitations of time and space and allowing for broader sharing of educational resources. At the same time, digital technology requires teachers, students, and educational administrators to continuously adapt to new technologies and methods to cope with the increasingly complex and dynamic educational environment. In the corporate sector, the application of digital production, supply chain management, and logistics tracking has improved production efficiency, reduced costs, and enhanced corporate competitiveness. Additionally, digitization plays an important role in agriculture, transportation and logistics, financial services, retail, energy management, manufacturing, and government services.

The development of digitization has also brought new trends and challenges. For example, the new track layout led by digital productivity has become a new focus of industrial innovation, dynamic precise governance models are rapidly radiating across various industries, the awareness of improving digital literacy and skills is fully awakened, the industrial internet driven by orders is accelerating development, and capability middle platforms have become decisive tools for leading digital enterprises. These trends and challenges provide more opportunities and possibilities for the development of digitization.

4.1 Personalization and Intelligence in the Educational Process under the Digital Background

Digital technology enables personalized teaching. Through intelligent recommendation systems, teachers can customize learning plans for students based on their progress, interests, and abilities. At the same time, digital technology can realize real-time monitoring and data analysis of students' learning behaviors, providing more precise feedback and guidance to teachers [4]. Teachers can rely on data provided by software and platforms before and after classes to better understand students' learning conditions, perform learning analysis, and consolidate course knowledge after class using digital technology, thus broadening students' knowledge reserves and tapping their potential.

4.2 Diversity and Innovation of Teaching Methods under the Digital Background

Digital technology provides ample space for the innovation of teaching methods. Teachers can use online courses, virtual reality, augmented reality, and other technologies to create more vivid and interesting teaching scenarios, stimulating students' interest and enthusiasm for learning [7]. For basic medical courses, virtual simulations can better help junior students learn professional knowledge in a more intuitive and three-dimensional way.

4.3 Abundance and Sharing of Educational Resources under the Digital Background

Digital technology makes the acquisition and sharing of educational resources more convenient. Through digital platforms such as big data, cloud data, and artificial intelligence, teachers and students

can easily access various high-quality educational resources, such as electronic textbooks, online courses, and online libraries. Additionally, digital technology can promote resource sharing and cooperation between different regions and schools, promoting balanced educational development.

4.4 Openness and Interactivity of the Educational Environment under the Digital Background

Digital technology strongly supports the construction of open and interactive educational environments. Through online discussions and collaborative learning, students can overcome time and space constraints to communicate and cooperate with peers, teachers, and even experts in real time, expanding their learning horizons and depth. The three-year COVID-19 pandemic accelerated the development of online courses, enhancing the openness and interactivity of the educational environment and creating more possibilities for higher education.

4.5Highlighted Technical Barriers and Data Security Issues under the Digital Background

Although digital education brings numerous advantages, it also faces some challenges in practical applications. For example, technical barriers may prevent some teachers or students from fully utilizing digital resources; both teachers and students often rely on technical professionals for support, and technical issues can affect course teaching and practical applications. On the other hand, data security issues are a major concern, with the protection of students' privacy and information security needing urgent solutions. Medical students, when faced with vast amounts of electronic information and highly automated medical equipment, may neglect emotional and humanistic care for patients, leading to a weakening of humanistic sentiments.

5. The Current Application of Cultivating Humanistic Sentiments in Medical Professional Courses under the Digital Background

5.1Single Form of Cultivating Humanistic Sentiments in Medical Students under the Digital Background

Research has found that the cultivation of humanistic sentiments in professional courses mainly relies on ideological and political education and humanistic literacy courses, such as "Nurse Humanistic Literacy" and "Medical Ethics." Students rely on teachers' theoretical teaching during the learning process, which does not deeply engage them. Ideological and political education emphasizes subtle influence, internalization, and external manifestation, but pure theoretical teaching does not provide students with a strong sense of gain [8]. Additionally, extracurricular activities like the second classroom, "Going to the Countryside" initiatives, Nurses' Day, and Doctors' Day events encourage students to participate actively for higher comprehensive quantitative scores, but these activities have limited long-term impact on their careers.

5.2 Lack of Systematic Cultivation of Humanistic Sentiments in Medical Students under the Digital Background

With the rapid development of information technology, digital platforms have become important carriers of modern education, playing a crucial role in the cultivation of humanistic sentiments. Current online teaching platforms, such as Zhihuishu, Wisdom Tree, and UMOOCs, allow teachers to build platforms online, where they can post cases, courseware, and exercises for students to learn from [5]. Rich online content enhances students' thinking and experiential space, promoting autonomous learning. Social media platforms like QQ and WeChat have also become places for students to share their views and thoughts, promoting communication and adding interest and expansiveness to cultural learning. However, in a digital background, the focus tends to be on the development of students' knowledge, skills, and comprehensive qualities within a course, lacking a systematic, thorough, and comprehensive cultivation of humanistic sentiments related to medicine and serving the people [6].

5.3The Urgent Need for Teachers to Adapt Their Roles under the Digital Background

To meet the challenges of the digital background, first, there should be an emphasis on teacher training and technical support to enhance their digital literacy and capabilities. Second, a comprehensive data security management system and technical measures should be established to

ensure the security and privacy of student information. Third, policy guidance and financial support should be strengthened to promote the popularization and development of digital education. Teachers should become guides in student learning, helping students plan their learning, select resources, and stimulate their interest and motivation. Teachers should also become question-answerers, promptly addressing students' questions and confusion during the learning process. Lastly, teachers should act as evaluators, analyzing and mining student learning data to provide precise feedback and suggestions.

6. Strategies to Enhance the Cultivation of Humanistic Sentiments in Medical Students

Based on the above, the following strategies are proposed to enhance the effectiveness of cultivating humanistic sentiments in medical students:

6.1 Increase the Emphasis on Humanistic Education

Medical schools should fully recognize the importance of humanistic education in training medical students and treat it with the same importance as professional education. This ensures that students not only master professional knowledge but also possess humanistic sentiments. Besides the mandatory humanistic courses required by the state, it is recommended to strengthen the emphasis on humanistic education through second classrooms, alumni associations, and school history museums, thereby influencing students' emotional and rational cognition and behavior awareness.

6.2 Innovate Humanistic Education Methods

Medical schools should continually explore new teaching methods and approaches, such as case-based teaching, role-playing, and group discussions, to stimulate students' interest and enthusiasm for learning. Additionally, digital technologies, such as online courses and virtual simulations, can provide students with richer and more vivid learning experiences.

6.3 Strengthen Practical Teaching Components

Medical schools should enhance cooperation with hospitals and community practice bases to provide more practical opportunities for students. Through hands-on experience with actual medical work, students can better understand and appreciate patients' needs and feelings, thus enhancing their humanistic sentiments. Different levels of medical education should not neglect the critical stages of internships and clinical practice. Avoiding these opportunities for reasons like upgrading academic qualifications or pursuing graduate studies can lead to a lack of humanistic literacy in medical students.

6.4 Establish a Comprehensive Evaluation System

Medical schools should establish a comprehensive evaluation system for humanistic education, conducting regular assessments and feedback on students' humanistic qualities. It is recommended to rely on digital technologies, building or utilizing information platforms to collect third-party evaluation materials. This helps to promptly identify issues and take corresponding measures for improvement, ensuring the quality and effectiveness of humanistic education.

Conclusion

The "Healthy China" strategy has set higher requirements for the training of medical students, and the digital background brings new opportunities and challenges to education and teaching [9]. By leveraging the advantages of digital technology, we can significantly enhance the quality and efficiency of education and training, cultivating more competitive and creative medical talents. At the same time, we need to acknowledge the difficulties and challenges that may arise during the digital transformation and take effective measures to address them. In future education and teaching, we look forward to seeing more innovative applications and practices, collectively promoting the prosperity and development of the education sector.

Fund Project

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