

# Exploration and Practice of High-Quality Talent Cultivation of Stomatology under the Background of New Medicine

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## Abstract

The health China strategy and the construction of new medical science have provided opportunities and brought challenges to the stomatology. Under the new situation, in order to cultivate high-quality applied stomatology talents, our school carries out practice and exploration by insisting on moral education and cultivating people, optimizing curriculum, strengthening practical teaching, promoting the integration of industry and education, reforming teaching methods and improving evaluation methods, and puts forward the direction of future dentistry talent cultivation efforts around the construction of new medicine.

## Keywords

New Medicine, Stomatology Specialty, Talent Training

## 1. Introduction

The 19th National Congress of the Party made a major decision to implement the “Health China Strategy”, which elevates the maintenance of people’s health to the height of national strategy. The national strategy of “Healthy China” puts forward new requirements for high-quality medical education, and innovation has become the main line of education reform and development. In 2018, the General Office of the State Council issued an important document on the reform and development of education in the new era, the construction of new medicine disciplines adapts to the new round of scientific and technological revolution. It proposes a new concept of the whole cycle of life health and changes from diagnosis and treatment to prevention and treatment, rehabilitation and health care. It advocates interdisciplinary crossover and cooperation, and cultivates complex

talents. The development of new medicine is the latest requirement of the Party and the State for the development of medical education in the new era, which is an important foundation for building a healthy China. Under the new situation, early practice, early training and improving job competency in the process of cultivating stomatology talent is an important guarantee to promote the health China strategy (Li & Zhou, 2021).

School of Stomatology of Youjiang Medical University for Nationalities was founded in 2000. It is a first-class majors construction site in Guangxi. During the 20 years, our school has cultivated a number of high-quality applied stomatology talents for southwest Guangxi. In 2020, the total passing rate of the examination for stomatologists for fresh graduates was 86.27%, nearly 10% higher than average, and 20.96% higher than that in 2019.

Our school places equal emphasis on both morality and ability, and takes multiple measures to cultivate high-quality stomatology talents for grassroots areas. In order to establish first-class majors and cultivate more high-quality applied talents, our school improve the assessment method, we stick to morality education, optimize the curriculum, strengthen practical teaching, reform of teaching methods, improve the assessment method and promote the integration of industry and education.

## 2. Objective and Orientation of Cultivating Stomatology Talent

### 2.1. Objective of Cultivation

According to the orientation and development plan of our school, the stomatology major is oriented to the Competency of position, cultivating high-quality applied stomatology talents who love the motherland, meet the development needs of medical and health care in the new era, master the basic theories and skills of basic medicine, clinical medicine and stomatology medicine, it's also have strong innovative spirit and practical ability and strong development potential. The students must have all around development of moral, intellectual, physical, aesthetics and labour education, and should be able to develop a comprehensive quality of professional work.

### 2.2. Ability Requirements

Stomatology is an important part of medicine, and the goal of cultivating excellent stomatology talents in the new era is not simply to cultivate qualified dentists, but should be to cultivate new medical stomatology professionals with profound medical literacy and humanistic care. According to the basic abilities required of college students (Gao, 2021), combined with the characteristics of stomatology, high-quality applied stomatology talents should have the following abilities. First, they should have better humanistic and social science literacy, strong sense of social responsibility, good solidarity and cooperation spirit, qualified ideological character and professional ethics. Second, they should have good

communication and expression ability, organization and management ability and adaptability. The third is that they should have the ability of learning throughout life, and the ability of innovation and entrepreneurial.

### **3. Practice and Exploration**

#### **3.1. Sticks to Morality Education**

The college of stomatology insists on moral education and attaches importance to the construction of study style. The new students can have different perspectives on the stomatology profession through the new students' entrance education with different themes. Through inviting outstanding alumni to give special lectures, students can strengthen their sense of professional identity and their responsibility as a medical student to "put people as the center and take health as the foundation". Through the organization of social practice and volunteer activities, the students went to impoverished areas for medical consultation and research, so that the students accomplished a lot in the practice activities. At the same time, give full play to the educational function of the professional curriculum, pay attention to the construction of Ideological and Political Education. Explore the ideological and political elements of the curriculum, built a library of ideological and political elements. The course of "Preventive Dentistry" were awarded as 2021 Guangxi general undergraduate college ideological and political demonstration course.

#### **3.2. Optimize the Curriculum**

Optimizing the arrangement of curriculum in order to meet the objective of cultivation. Building a curriculum system that is conducive to the coordinated development of students' knowledge, ability and quality. The curriculum follow the latest national standard of stomatology profession, aim to consolidating professional foundation, strengthening professional skills and creating special courses. The curriculum content closely stick to the syllabus of the Dental Licensing Examination, oriented to job competency and focused on the cultivation of practical ability, and the proportion of practical teaching session credits to the total credits is 59.5%, among which the proportion of practical teaching session hours of professional courses to the total hours is as high as 66.8%. By comprehensively integrated the teaching content ,highlighting the integration of content and application of knowledge, strengthening students' awareness of innovation and entrepreneurship. School offered new innovative training courses enhance students' awareness of innovation and entrepreneurship, such as "Academic Development and Career Planning" and "Dental Clinic Setup and Management" etc.

#### **3.3. Strengthen Practical Teaching**

According to the talent training plan, the training of practical teaching, clinical skills and social practice ability is strengthened to cultivate composite dentistry

talents with strong adaptability to jobs. The practical teaching is carried out throughout the whole process of student cultivating. Structuring “four-dimensional” training mode that include professional cognition, basic knowledge, Operating skills, moral education. In the first two years of college, the courses of “Basic Oral Health Care” and “Basic Skills Training of Stomatology Hands” were offered to carry out public welfare social practice. In the third and fourth years, intensive training of basic professional skills were carried out before the internship and training of clinical skills and clinical thinking ability during the internship. After the internship and, practitioner examination skill training adopt “five-step” training method. The concept of labor service of students is integrated with hand skill training, the spirit of craftsmanship of improving students is integrated with multi-stage comprehensive skill training and assessment, and the professional quality is integrated with clinical practice. In 2020, the passing rate of the dental practice examination for fresh graduates of this program is 98.16%, which is higher than the national average.

### **3.4. Reforms of Teaching Methods**

In addition to imparting theoretical knowledge and practical skills to students, we carry out teaching method reform and also pay attention to guiding students to conduct independent learning. We reform teaching methods and improve teaching quality. First, we use various teaching methods, such as CBL, PBL, TBL, sandwich, etc. Second, we insist on the integration of online and offline, broaden the teaching time and space, establish 5 online courses, carry out blended learning. Student-Centered Teaching method can stimulating students’ interest in learning, developing students’ personality, highlighting students’ main role, and effectively promoting the cultivation of students’ independent learning ability. Third, we insist on the combination of virtual and real, equipped with virtual simulation training system and 30 sets of virtual operation terminals, the combination of training base and dental-spa virtual simulation practice platform, combining information technology and education teaching In-depth integration, effectively create clinical teaching scenarios.

### **3.5. Improve the Assessment Method**

Focus on students’ overall development, assessment and evaluation method change from a one-dimensional assessment that focuses on knowledge to a multi-dimensional assessment. We strengthen formative evaluation in academic evaluation, increase the proportion of formative evaluation in the overall evaluation, summarize evaluation focusing on the comprehensive application of students’ knowledge. At the same time, the dental skills training real-time assessment system is constructed to systematically analyze and grade the students’ operation process and provide objective data for teachers to evaluate the students’ operation effect. It can evaluate the operation items such as cavity preparation, tooth preparation and sitting posture in real time. Applying this assessment system to

students' operation training and achieving accurate evaluation effects. The students won many awards in the National Undergraduate Dental Clinical Operation Skills Demonstration Competition in recent years.

### **3.6. Promote the Integration of Industry and Education**

Strengthen school-enterprise cooperation, invite industry and enterprise faculty to participate in talent training, participate in the discussion of talent training plan, participate in the teaching process, and participate in the guidance of students' graduation practice. Cooperate with enterprises to develop and construct two courses, formulate curriculum standards, teaching objectives and implementation suggestions. with the help of industrial entities, radiate the enterprises of dentistry, and the part-time teachers of enterprises participate in teaching, and jointly complete the practical training teaching, for example, jointly with Changzhou Yirui Medical Equipment Co. Ltd. to provide equipment and consumables as well as trainers. School and enterprise jointly build social practice bases and 7 practice teaching bases together. In addition, the school has established the innovation and entrepreneurship mentor group and the construction of "double teachers and double-competent" teacher team to achieve resource sharing and effectively improve students' innovation and entrepreneurial ability and practical ability.

## **4. Outlook**

### **4.1. Insist on the New Concept of "Health-Centered"**

With the arrival of the new scientific and technological revolution, medicine is entering the era of integrated medicine. The new medical era requires the development of "new medicine". The two core tasks of new medicine are "service demand" and "quality improvement" (Wang, 2018). In the process of cultivating stomatology talents, we should always adhere to the "new concept" of taking people's health as the center, integrate the concept of "big health" into all aspects (enroll new students, culturing, employment, etc.) and all stages (college medical education, post-graduation medical education and continuing medical education). The focus of talent training should be expanded from treatment to prevention, treatment and recreation, which means serving the whole life cycle and the whole health process.

### **4.2. Strengthen the Intercession of Subjects**

In 2020, the Guidance on Accelerating the Innovative Development of Medical Education clearly proposed to promote the cultivation of "Medicine + X" multidisciplinary background of composite innovative and outstanding talents, which has pointed out the direction for the better growth and development of medical students in the new era. With the widespread application of precision medicine, alternative medicine and intelligent medicine in the field of stomatology, composite stomatology talents with multidisciplinary background are needed, which

requires strengthening the integration between dentistry, science and engineering, so as to optimize the knowledge structure and ability of stomatology talents.

### 4.3. Promote Reform of Teaching Methods Continuously

The construction of new medicine requires high-quality innovative talents. It was found that PBL teaching, which accounts for 80% of the credit hours in Russian dentistry education, prompted students to allocate more time to independent research and deep mastery of professional knowledge, effectively cultivating students' lifelong learning ability and innovation ability (Lv, Tan, & Pan, 2019). Therefore, in response to the problem that students have low learning initiative and motivation, we should continue to promote classroom teaching reform to improve the quality of talent cultivation by reasonably increasing the difficulty of the curriculum and selecting appropriate teaching methods and means as well as academic evaluation methods.

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### Conflicts of Interest

The authors declare no conflicts of interest regarding the publication of this paper.

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