The Path of Building Core Knowledge Question Bank for Postgraduate Students in Traditional Chinese Orthopedics and Traumatology from the Perspective of New Medicine

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Abstract: *This paper focuses on the problems in graduate education of traditional Chinese medicine orthopedics and traumatology, as well as the development trend of new medical theories, and explores the construction path of the core knowledge question bank of traditional Chinese medicine orthopedics and traumatology graduate students based on the perspective of new medical science. By analyzing the characteristics of traditional Chinese medicine orthopedics and the application of new medical theories, strategies such as patient-centered approach, fully leveraging the advantages of new medical theories, and intelligent learning system assisted learning have been proposed. This paper aims to promote the innovative development of traditional Chinese medicine orthopedic science education, and improve the comprehensive quality and practical ability of graduate students.*

Keywords: *new medical perspective, traditional Chinese medicine orthopedics and traumatology, graduate education, core knowledge question bank*

1. Introduction

With the development of society and the advancement of medical technology, traditional Chinese medicine orthopedics plays an important role in the field of traditional Chinese medicine. As an important component of traditional Chinese medicine, traditional Chinese orthopedics has accumulated rich experience and knowledge in the treatment of diseases such as fractures and joint injuries. However, with the changing times and the constantly changing medical environment, the development of traditional Chinese medicine also faces new challenges and opportunities. In this context, it is particularly important to build a core knowledge question bank for graduate students in traditional Chinese medicine orthopedics and traumatology that conforms to the new medical perspective. This core knowledge question bank will provide comprehensive and systematic learning resources for graduate students in the field of traditional Chinese medicine orthopedics and trauma science, helping them better understand the theoretical system and clinical practice of traditional Chinese medicine orthopedics and trauma science, and improve their professional level and comprehensive literacy[1]. However, under the current knowledge management and dissemination methods, traditional paper textbooks and literature are no longer able to meet the diverse and personalized learning needs of students. Therefore, with the application of information technology, intelligent management and retrieval systems can be used to create a convenient and efficient learning platform for graduate students in traditional Chinese medicine orthopedics and trauma science, improving their learning

efficiency and outcomes.

This paper aims to explore the construction path of the core knowledge question bank for graduate students in traditional Chinese medicine orthopedics and traumatology based on the new medical perspective. Through the application of key technologies and methods such as information technology, data mining, and knowledge graphs, new ideas and methods are provided for the education and research of traditional Chinese medicine orthopedics and traumatology. At the same time, this study will also evaluate the effectiveness and significance of the construction of the core knowledge question bank based on practical cases, pointing out the direction for the future development of traditional Chinese medicine orthopedic science.

2. Analysis of the current situation of the construction of core knowledge question banks in traditional Chinese medicine orthopedics and trauma science

2.1 Concepts and characteristics of core knowledge question bank construction in traditional Chinese medicine orthopedics and traumatology

The core knowledge question bank of traditional Chinese medicine orthopedics and traumatology is a learning resource that systematically organizes, classifies, and summarizes professional knowledge and techniques in the field of traditional Chinese medicine orthopedics and traumatology [2]. This question bank aims to provide a comprehensive knowledge framework for graduate students in traditional Chinese medicine orthopedics, covering the basic theories, clinical practices, diagnostic methods, and treatment plans of traditional Chinese medicine orthopedics. Its characteristics mainly include the following aspects: Firstly, the core knowledge question bank of traditional Chinese medicine orthopedics and traumatology is centered on traditional Chinese medicine orthopedics and traumatology, encompassing knowledge from multiple disciplinary fields. It not only includes the content of traditional Chinese medicine theory and classic literature, but also integrates the research achievements of modern orthopedic and injury science, enabling students to comprehensively understand the development process and current situation of traditional Chinese orthopedic and injury science. Secondly, the core knowledge question bank of traditional Chinese medicine orthopedics and traumatology has a systematic and hierarchical nature. It organizes knowledge in a certain logical order, from basic knowledge to professional knowledge, from theory to practice, forming a complete knowledge system. Students can choose corresponding content for learning based on their learning needs and level.

In addition, the core knowledge question bank of traditional Chinese medicine orthopedics emphasizes practicality and operability. It not only provides learning of theoretical knowledge, but also includes case analysis of clinical practice, guidance on skill operations, and other content. This helps students apply the knowledge they have learned to practical clinical practice, improving their clinical abilities and practical experience.

2.2 Analysis of the current situation of the construction of core knowledge question banks for traditional Chinese medicine orthopedics and traumatology at home and abroad

At home and abroad, progress has been made in the construction of the core knowledge question bank of traditional Chinese medicine orthopedics and traumatology. Some domestic universities and research institutions have actively carried out related work and built a batch of core knowledge question banks of traditional Chinese medicine orthopedics and traumatology with certain scale and influence [3]. These question banks cover various fields and aspects of traditional Chinese medicine orthopedics and have played a positive role in promoting education and research in this field.

In foreign countries, some international organizations and academic institutions in traditional Chinese medicine orthopedics are also committed to the construction of core knowledge question banks in traditional Chinese medicine orthopedics. They have established a cross-cultural and multilingual core knowledge question bank for traditional Chinese medicine orthopedic and injury science by integrating academic resources from different countries and regions, promoting the exchange and cooperation of traditional Chinese medicine orthopedic and injury science on a global scale.

2.3 Existing problems and challenges

Although the construction of the core knowledge question bank of traditional Chinese medicine

orthopedics and traumatology has achieved certain results, it still faces some problems and challenges. Firstly, updating knowledge and ensuring knowledge quality are important issues. The research in the field of traditional Chinese medicine orthopedics is advancing rapidly, and new theories and technologies are constantly emerging. Therefore, the core knowledge question bank of traditional Chinese medicine orthopedics and traumatology needs to be updated and improved in a timely manner to ensure that its content can keep up with the times. In addition, it is necessary to review and evaluate the knowledge in the question bank to ensure its quality and accuracy. Secondly, the construction of question banks needs to focus on personalization and differentiation. There are differences in knowledge mastery and learning methods among different students. Therefore, the construction of the core knowledge question bank of traditional Chinese medicine orthopedics and traumatology should consider meeting the personalized needs of students and provide diverse and flexible learning resources and tools. Finally, technical support and resource guarantee are the key to the construction of the core knowledge question bank of traditional Chinese medicine orthopedics and trauma science. Building a comprehensive and systematic question bank requires a significant investment of manpower, material resources, and financial resources, and relies on the support of information technology. Therefore, it is necessary to strengthen investment in technology development and resource construction to ensure the sustainable development of the core knowledge question bank of traditional Chinese medicine orthopedics and trauma science.

In summary, traditional Chinese medicine orthopedics and traumatology has made certain progress in the construction of core knowledge question banks for graduate students both domestically and internationally, but still faces some problems and challenges. By fully understanding and analyzing these issues, it can provide reference and inspiration for the construction of the core knowledge question bank of traditional Chinese medicine orthopedic and injury science in the future, and promote greater progress in education and research in the field of traditional Chinese medicine orthopedic and injury science.

3. Exploration of the construction path of core knowledge question bank for graduate students in traditional Chinese medicine orthopedics and traumatology from the perspective of new medical science

3.1 The role of new medical theories in the construction of core knowledge question banks for graduate students in traditional Chinese medicine orthopedics and trauma science

The introduction of new medical theories in the construction of core knowledge question banks for graduate students in traditional Chinese medicine orthopedics and traumatology will have a profound impact and effect. Firstly, the new medical theory is a product that combines the development trend of modern medicine with traditional Chinese medicine theory, and has high practical value and foresight. In the construction of core knowledge question banks, new medical theories can provide scientific guidance for the integration of relevant knowledge resources, thereby constructing a more complete and systematic core knowledge question bank. Secondly, new medical theories can also promote the development of integrated traditional Chinese and Western medicine. Traditional Chinese medicine and Western medicine, as two different medical systems, each have unique advantages and disadvantages. Through the introduction of new medical theories, it is possible to deepen the integration of traditional Chinese and Western medicine in the field of orthopedics and injury science, form more scientific and comprehensive treatment plans, and improve the treatment effectiveness and level of orthopedics and injury science. In addition, the new medical theory can provide broader ideas and perspectives for the development of traditional Chinese medicine orthopedics and trauma science. Traditional Chinese medicine theory is an important component of traditional Chinese medicine orthopedics, but with the continuous development and progress of modern medicine, traditional Chinese medicine theory needs to be updated and upgraded in conjunction with the development trend of modern medicine. The introduction of new medical theories can provide a broader perspective and perspective for the research of traditional Chinese medicine orthopedics, promote the interdisciplinary integration of traditional Chinese medicine orthopedics, and promote the comprehensive development of orthopedics. Therefore, the new medical theory plays an important role in the construction of the core knowledge question bank for graduate students in traditional Chinese medicine orthopedics and trauma science. With the guidance of new medical theories, various related knowledge resources can be better integrated, and a more comprehensive and systematic core knowledge question bank can be constructed. At the same time, the introduction of new medical theories can also promote the integration of traditional Chinese and Western medicine, promote the interdisciplinary integration of traditional Chinese orthopedics and

provide broader ideas and perspectives for the construction of core knowledge question banks.

3.2 Guiding ideology for the construction of core knowledge question banks for graduate students in traditional Chinese medicine orthopedics and traumatology from the perspective of new medical disciplines

In the process of constructing the core knowledge question bank for graduate students in traditional Chinese medicine orthopedics and traumatology based on the new medical perspective, the principle of patient-centered should be adhered to. This means prioritizing the needs, condition, and treatment outcomes of patients, ensuring that the content contained in the core knowledge question bank truly serves clinical practice and the health needs of patients. By conducting in-depth research and exploration, combining theory with practice, we continuously promote the progress of medical practice [4].

At the same time, close attention should be paid to the development of cutting-edge medical knowledge and technology, and the content of the core knowledge question bank should be updated and improved in a timely manner. The knowledge and technology in the medical field are advancing rapidly. By timely following up on the latest research results and clinical practice experience, the accuracy and timeliness of the core knowledge question bank are maintained, keeping it up-to-date and providing students with the latest and most effective reference materials.

In addition, in order to improve the quality and level of core knowledge question bank construction, team collaboration and professional talent cultivation should also be strengthened. Build a multidisciplinary research team that integrates experts and scholars from different fields to jointly participate in the construction and maintenance of the core knowledge question bank. Through teamwork and collaboration, professional advantages in various fields can be fully utilized, the quality of core knowledge question banks can be improved, and broader perspectives and ideas can be provided for the research and development of traditional Chinese medicine orthopedics and traumatology.

3.3 Key technologies and methods for constructing core knowledge question banks for graduate students in traditional Chinese medicine orthopedics and traumatology from a new medical perspective

The application of key technologies and methods is crucial in the construction of the core knowledge question bank for graduate students in traditional Chinese medicine orthopedics and traumatology based on the new medical perspective. This includes the application of information technology, data mining, and knowledge graph construction. The introduction of these technologies and methods will bring great convenience and benefits to the construction and use of the core knowledge question bank.

3.3.1 Information technology assists intelligent management of knowledge bases

With the application of information technology, intelligent management and retrieval of knowledge bases can be achieved [5]. Information technology should be utilized to transform traditional paper-based question banks into digital forms, allowing students to learn and practice anytime, anywhere. By establishing an online question bank platform, students can easily obtain questions, take mock exams, and the system records their learning progress and grades, providing them with personalized learning guidance. By adopting advanced information management systems and technological tools, massive knowledge resources can be integrated into a unified platform, and personalized and accurate knowledge retrieval services can be provided through intelligent search and recommendation algorithms. This not only improves the experience and efficiency of students, but also enables them to push the latest research results and clinical practice experience according to their needs and interests, enabling users to obtain the most valuable information in a timely manner.

3.3.2 Data mining assists in the construction of core knowledge question banks

Data mining and analysis techniques also play an important role in the construction of core knowledge question banks. Firstly, by analyzing and mining large-scale clinical and research data, valuable information and patterns can be discovered. These pieces of information can be used to update and optimize the content of the core knowledge question bank, making it more relevant to actual clinical needs and providing more scientific and reliable reference basis. Data mining technology can also help discover new research directions and treatment methods, providing new ideas and

breakthroughs for the development of traditional Chinese medicine orthopedics and trauma science. Secondly, we need to use data analysis techniques to statistically analyze the learning situation of students and the use of question banks. By collecting student answer data and learning behavior data, their learning effectiveness and mastery can be evaluated, and targeted learning advice and guidance can be provided to them. In addition, we can also use natural language processing techniques to analyze and process the text in the question bank. By exploring the correlation and difficulty level between questions, the organizational structure of the question bank and the difficulty distribution of the questions can be optimized, improving the learning effectiveness and ability level of students.

3.3.3 Using artificial intelligence to build an intelligent learning system

Building an intelligent learning system using artificial intelligence technology can greatly improve the learning experience. By utilizing machine learning and recommendation algorithms, the system can tailor and recommend suitable learning resources and questions for students based on their learning situation and personalized needs [6]. This personalized recommendation not only improves learning efficiency, but also stimulates students' interest and motivation in learning, making them more engaged in the learning process. By analyzing students' learning habits and feedback data, intelligent learning systems can continuously optimize recommendation strategies, provide more accurate and effective learning support for students, and promote their learning growth and progress.

4. Future prospects for the construction of core knowledge question banks for graduate students in traditional Chinese medicine orthopedics and traumatology from the perspective of new medical disciplines

4.1 Development trend analysis

With the continuous development of traditional Chinese medicine orthopedic science, the construction of the core knowledge question bank for graduate students in traditional Chinese medicine orthopedic science will also face new development opportunities. The future development trend is mainly reflected in the following aspects: firstly, the construction of the core knowledge question bank for graduate students in traditional Chinese medicine orthopedics and trauma science will focus more on practicality and applicability. By integrating cutting-edge clinical practice experience and scientific research achievements, patient-centered, we aim to build a core knowledge question bank that is more closely aligned with actual clinical needs. Secondly, the new medical perspective will become an important theoretical basis for the construction of the core knowledge question bank for graduate students in traditional Chinese medicine orthopedics and trauma science. Through in-depth research and exploration, we will combine new medical theories with the theoretical system of traditional Chinese medicine orthopedics and trauma science, and create a core knowledge question bank for Chinese medicine orthopedics and trauma science graduate students with more modern medical characteristics. Finally, the application of intelligent learning systems will become a new trend in the construction of core knowledge question banks for graduate students in traditional Chinese medicine orthopedics and traumatology. By utilizing artificial intelligence technology to build an intelligent learning system, suitable learning resources and topics are recommended based on the learning situation and personalized needs of students, in order to improve learning efficiency and stimulate their interest in learning.

4.2 Existing problems and solutions

In the process of constructing the core knowledge question bank for graduate students in traditional Chinese medicine orthopedics and trauma science, there are also some problems and challenges that need to be addressed through corresponding measures. The theoretical system of traditional Chinese medicine orthopedics and traumatology has to some extent fallen behind the development of modern medicine. Therefore, when constructing the core knowledge question bank for graduate students in traditional Chinese medicine orthopedics and injuries, attention should be paid to combining it with modern medical knowledge, and the core knowledge content should be continuously updated and adjusted according to the development trend of modern medicine. Furthermore, although intelligent learning systems can improve learning efficiency and interest, there may also be issues with insufficient accuracy in practical use. Therefore, in the construction and maintenance of intelligent learning systems, it is necessary to fully consider the personalized needs of different students, while strengthening the optimization and updating of system algorithms to improve their accuracy and

effectiveness.

4.3 Challenges and response strategies

With the continuous development of traditional Chinese medicine orthopedics, the construction of core knowledge question banks for graduate students in traditional Chinese medicine orthopedics is also facing some challenges and pressures. The theoretical system of traditional Chinese medicine orthopedics and traumatology is relatively complex, with a large amount of knowledge points. Therefore, how to transform it into core knowledge points that are easy to learn and master is one of the current problems that needs to be solved. In this context, we need to conduct in-depth research and analysis, select key knowledge points for integration and optimization, so that they can not only comply with the theoretical system of traditional Chinese medicine orthopedics and trauma science, but also meet practical clinical needs. At the same time, the construction of the core knowledge question bank for graduate students in traditional Chinese medicine orthopedics and traumatology requires the involvement of knowledge from multiple disciplines and fields, and the establishment of interdisciplinary collaboration mechanisms to ensure the comprehensiveness and accuracy of knowledge points. Therefore, we need to actively promote interdisciplinary communication and cooperation, establish a multidisciplinary research team that integrates multiple disciplines, and jointly participate in the construction and maintenance of the core knowledge question bank of traditional Chinese medicine orthopedics and trauma science graduate students.

5. Conclusion

This paper summarizes and organizes the relevant research on traditional Chinese medicine orthopedic and injury science, and analyzes and explores the application of new medical theories in traditional Chinese medicine orthopedic and injury science. It proposes a path for the construction of core knowledge question banks for graduate students in traditional Chinese medicine orthopedic and injury science based on the perspective of new medical science. Firstly, establish a patient-centered core knowledge system. The core knowledge question bank for graduate students in traditional Chinese medicine orthopedic and injury science should be based on clinical practice, patient-centered, and reflect the practical needs of the application of traditional Chinese medicine orthopedic and injury science. At the same time, we should combine the knowledge of modern medicine to build a core knowledge question bank that is more closely related to practical clinical needs. Secondly, fully leverage the advantages of the new medical theory. The new medical theory proposes a medical philosophy of "people-oriented, treating both symptoms and root causes", emphasizing the fundamental treatment of diseases by regulating the internal environment of the human body. In the construction of the core knowledge question bank for graduate students in traditional Chinese medicine orthopedic and injury science, the advantages of new medical theories should be fully utilized, combined with the theoretical system of traditional Chinese medicine orthopedic and injury science, to create a more modern medical characteristic core knowledge question bank for graduate students in traditional Chinese medicine orthopedic and injury science. Thirdly, adopting intelligent learning systems to assist learning. Intelligent learning systems can recommend learning resources and topics that are suitable for students based on their learning situation and personalized needs, in order to improve learning efficiency and stimulate their interest in learning. In the construction of the core knowledge question bank for graduate students in Traditional Chinese Medicine Orthopedics and Traumatology, the application of intelligent learning systems should be strengthened to improve students' learning efficiency and interest.

In summary, establishing a patient-centered, fully leveraging the advantages of new medical theories, and using intelligent learning systems to assist in learning, is an important way to promote the development of traditional Chinese medicine orthopedics and improve the quality and ability of graduate students in this field. In the future development, it is necessary to continuously improve and optimize the content and form of the core knowledge question bank of traditional Chinese medicine orthopedics and trauma science graduate students to meet the needs of the times and talent cultivation.

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