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Approaches to Achieving Effective Pre-Study for Systematic Anatomy

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Abstract: In the vast field of medical education, systematic anatomy serves as a solid cornerstone, firmly supporting medical students in their journey towards clinical professional knowledge. It is not just a course but also a key to unlocking the mysteries of medicine. This course is as rich as a vast treasure trove of knowledge, covering the fine structures and functions of various human body systems. Each knowledge point is like a bright pearl in the treasure trove. It is the foundation of clinical professional courses. Many subsequent clinical courses, such as diagnostics and surgery, rely on the basic understanding provided by systematic anatomy. Its professional vocabulary is also an important source of medical field terminologies, acting as the root of medical language and constructing the entire edifice of medical communication. Although the vocabulary of this course is rich, it is not complex. It is like a set of orderly-arranged jigsaw puzzles. As long as the correct methods are mastered, it is easy to piece them together. However, in the current teaching environment, the traditional cramming-style teaching method is like an old-fashioned carriage, showing obvious disadvantages on the road of the times. The pre-study link is like a rehearsal for a wonderful performance, having a direct and crucial impact on students' listening efficiency in class. Nevertheless, such an important teaching link is often overlooked, like a precious treasure forgotten in the corner. High-quality pre-study, for lecturers, is like giving wings to classroom teaching, which can greatly improve the efficiency of classroom teaching and make the teaching process smoother and more efficient. For students, it is like a magnifying glass that can deepen their understanding of knowledge points and their impression of the text, making the knowledge more clearly engraved in their minds. This article will focus on exploring the methods to achieve effective pre-study for systematic anatomy, hoping to contribute to the development of medical education.

Keywords: Effectiveness; Systematic anatomy; Teaching efficiency

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1. Introduction

As a foundational pillar of medical education, systematic anatomy is essential for understanding clinical disciplines. However, traditional teaching methods often overlook the critical role of pre-study, which serves as a vital rehearsal to enhance both teaching efficiency and student comprehension. This article therefore focuses

on strategies to achieve effective pre-study in systematic anatomy, aiming to improve learning outcomes and contribute to the advancement of medical education [1].

2. Teaching status quo of systematic anatomy and pre-study problems

In the long river of education, full-time undergraduate human anatomy lecturers are like navigators, leading one class of students after another to explore the ocean of medical knowledge. However, the current teaching still mainly adopts the traditional lecture-based model. It is like an old-fashioned projector. Lecturers deliver their lesson on the podium, while students passively listen below. This model makes both lecturers and students lack vitality.

For students, they are like containers being filled with knowledge, lacking the opportunities for active participation and thinking, so their learning interest is naturally not high. In class, their eyes often reveal confusion and fatigue, as if they have lost their way in the maze of knowledge [2]. For lecturers, each round of repetitive teaching is like a long-distance marathon, making them feel extremely tired. Although lecturers try their best to explain, hoping to accurately convey knowledge to students, this single teaching model is difficult to stimulate students' learning enthusiasm.

There is a sharp contradiction in current classroom teaching: classroom time is like the sand in an hourglass, limited and precious, while the teaching content is complex and extensive, like a dense forest that students need to explore deeply. The teaching progress is like an invisible thread that cannot be delayed, otherwise it will affect the evaluation and the teaching progress of other subjects. So, lecturers can only complete the required class hours within a limited time. Many students report that they can't keep up with the lecturer's teaching speed in class. It's like a car driving on the highway. They try their best to catch up but always fall short. Lecturers, on the other hand, think that their teaching speed is in line with the teaching progress and that the knowledge points are comprehensive. They are unable to understand why students can't keep up with their rhythm [2].

Although the importance of pre-study has always been emphasized, it's like repeatedly reminding travelers to bring essential luggage. However, very few students can actually preview before class. The contradiction between the lecturer's teaching speed and the students' acceptance level has never been effectively resolved. It's like a difficult puzzle that plagues both sides of teaching. Pre-study directly affects the listening efficiency in class, especially for medical students. Pre-study is like the first step in climbing the peak of medicine, which is essential. However, lecturers can't judge the students' pre-study situation and can't check it in class to avoid affecting the teaching progress [3]. It's like groping in the dark, not knowing whether students are ready to learn. To make students attach importance to pre-study, it needs to be transformed into a task that must be completed, just like giving students a clear instruction so that they can learn with goals and directions.

3. Pre-study methods and strategies for systematic anatomy

3.1. Course characteristics and pre-study content design

The course systematic anatomy is designed for freshmen majoring in clinical medicine, stomatology, and other medical specialties. They are like novices who have just stepped into the palace of medicine, with limited knowledge of human anatomy. In their perception, the human body is like a mysterious universe, full of unknowns and curiosities. At the same time, due to the professionalism and complexity of the course content, many students

have a fear of learning. It's like facing a towering mountain, feeling daunted.

Therefore, the design of pre-study content should fully consider the actual situation of students, be simple and easy to understand, and not take too much time. It's like preparing an easy-to-follow guide for students, allowing them to take the first step easily. At the same time, it should stimulate students' desire for exploration, like lighting a fire of curiosity in their hearts.

3.2. Methods to achieve active pre-study

First of all, it is necessary to establish students' awareness of pre-study and stimulate their interest in pre-study. In the new learning environment of the university, many students have not adapted to the rhythm of autonomous learning and need the guidance and supervision of lecturers. Lecturers should let students understand that the main task in university is to learn, and they must develop the habit of pre-study. It's like telling travelers to plan their itinerary in advance [3].

Lecturers should emphasize the importance of pre-study in the first class. It's like planting a seed in students' hearts. Inform students that the lack of pre-study will lead to difficulties in class and unsatisfactory grades, while effective pre-study can get twice the result with half the effort and enhance self-confidence. Some practical cases can be combined to let students more intuitively feel the benefits of pre-study. For example, there was once a student who, due to not developing the habit of pre-study, always couldn't keep up with the lecturer's rhythm in class and had unsatisfactory grades. Later, he realized the importance of pre-study and started to preview seriously. As a result, his grades improved significantly, and his self-confidence also increased.

The pre-study results can be scored and evaluated in combination with the total score. Pre-study should be included in the homework, and students should be required to complete it compulsorily. It's like setting a clear rule for students, letting them know that pre-study is an indispensable part of the learning process. After the lecture, assign pre-study homework, and randomly ask questions in the next class to examine the effectiveness of pre-study. Praise and give bonus points to students with good pre-study performance. This reward mechanism is like a catalyst that can stimulate students' enthusiasm and competitive spirit. For example, in class, lecturers can publicly praise students with excellent pre-study performance and let other students learn from them. At the same time, give bonus points, which are reflected in the final total score, so that students can feel the practical value of pre-study.

At the same time, lecturers should clearly guide students on pre-study methods and help them conduct effective pre-study. It's like giving students a key to open the door of knowledge. Pre-study can be arranged in class, and requirements can be gradually put forward to build a learning ladder. Offer pre-study guidance courses to teach students the skills to solve pre-study problems, integrate into the course, and assist in learning. For example, lecturers can teach students how to use textbooks, how to search for relevant materials, and how to take notes. In the pre-study guidance course, lecturers can demonstrate the application methods of these skills through practical operations, so that students can master them better.

The pre-study content should be set by lecturers in the form of courseware, with a large number of pictures and animations inserted, reducing text narration. It should combine regular and key content and highlight the key and difficult points. Pictures and animations are like vivid pictures that can enable students to more intuitively understand the structure and function of the human body. For example, when explaining the human skeletal system, animations can be used to show the movement and connection methods of bones, allowing students to see the shape and structure of bones more clearly [4]. Clinical cases or typical cases can also be inserted to guide students to ask questions during pre-study and find answers in class. Clinical cases are like real-life stories that can help students combine theoretical

knowledge with practical applications, improving the fun and practicality of learning.

3.3. Guidance on regular and key pre-study

Once pre-study becomes a norm, it is necessary to do a good job in guiding regular and key pre-study. Regular pre-study requires students to solve basic knowledge problems, just like laying a solid foundation when building a house. Students need to master the basic concepts, basic structures, and basic functions in the textbook to lay a solid foundation for subsequent learning. Key pre-study, on the other hand, requires lecturers to raise more difficult questions and guide students to search for information to broaden their knowledge. It's like building a tall building on the foundation, making students' knowledge more extensive and in-depth.

The accumulation of clinical knowledge is of great importance to medical students. It's like a weapon in the hands of doctors, which can help them better diagnose and treat diseases [4]. The pre-study courseware should be continuously improved, designed to be refined and beautiful, and incorporate internet buzzwords to highlight the key points. Internet buzzwords are like fashionable elements that can attract students' attention and increase the fun of learning.

3.4. Inspection of pre-study effectiveness

It is necessary to judge the effectiveness of pre-study through inspection and also check the pre-study courseware of lecturers [1]. Lecturers should pay attention to supervision and motivation to cultivate students' pre-study habits. At the beginning, lecturers can conduct supervision in person, like a strict supervisor, to ensure that students seriously complete the pre-study tasks. Lecturers can understand students' pre-study situations by checking their pre-study notes and communicating with them. Later, it can be adjusted to group mutual inspection. It's like a team-cooperation game, allowing students to supervise and learn from each other. Members within the group can check each other's pre-study assignments, exchange pre-study experiences, and improve together. Finally, let the group leader check.

In class, problems can be solved through questions, discussions, and answering doubts. The group leader is like the leader of the group, responsible for organizing and managing the pre-study work of the group. In class, lecturers can check the pre-study effects of students by asking questions and guide students to discuss to solve the problems encountered in pre-study.

The power of the group can also be exerted for mutual inspection and assistance. Group members can share their learning experiences and methods with each other and jointly solve the problems they encounter. For example, group members can discuss a clinical case together, analyze the human body structures and functions involved in the case, thereby deepening their understanding of knowledge. Through group mutual assistance, students can not only improve their learning ability but also cultivate team-cooperation spirit and communication skills.

3.5. Clarifying the purpose of pre-study and strengthening awareness

By achieving the above points, students can clarify the purpose of pre-study and enhance their awareness of active pre-study. When students clearly understand the importance and goals of pre-study, they are like a ship with a rudder, moving forward in the ocean of knowledge in the right direction [5]. Lecturers can help students gradually develop the habit of active pre-study by guiding them to establish pre-study awareness, providing effective pre-study methods, and conducting inspections of pre-study effectiveness. This habit is like a precious asset that can accompany students throughout their lives and benefit them in learning and work.

4. Positive impacts of pre-study on classroom learning

Having a good pre-study habit gets the course learning off to a good start and prepares students for classroom learning. Students are like well-equipped soldiers, confidently facing the challenges of classroom learning. Students understand that pre-study is a prerequisite for classroom teaching. It allows them to have a preliminary understanding of new lesson content, and they can get better results when listening to the class with preparation. It's like a wonderful performance; Only when the actors have fully rehearsed before the performance can they perform more confidently and outstandingly on the stage.

5. Conclusion

In summary, systematic anatomy constitutes the indispensable foundation of medical education, yet its mastery is often challenged by traditional, passive teaching methods. This article underscores the critical but frequently overlooked role of pre-class study as a powerful lever to enhance both teaching and learning efficacy. By shifting the focus towards developing and implementing effective pre-class preparation strategies, we can transform the learning experience of systematic anatomy. Such an approach promises to deepen students' understanding, improve classroom efficiency, and ultimately build a more robust knowledge base for their future clinical pursuits. Therefore, prioritizing and innovating pre-study methodologies is not merely beneficial but essential for advancing the quality of medical education [5].

Disclosure statement

The authors declare no conflict of interest.

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