

Application of the PAD Class Teaching Model in High School Education

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Abstract: The teaching mode of the Presentation-Assimilation-Discussion (PAD) class is beneficial to adapt to the objective needs of the transformation of modern talent training mode and optimize the ecology of classroom teaching. In the process of high school teaching, we should pay attention to grasp the concept, effectiveness, and goal orientation of the PAD class, follow the basic steps of knowledge teaching, internalization and absorption, mutual learning, discussion, and exchange, and realize the cultivation of core subject literacy in the process of two-way interaction between teaching and learning.

Keywords: Presentation-Assimilation-Discussion class; Senior high school teaching; Core literacy

Online publication: November 27, 2024

1. Introduction

Presentation-Assimilation-Discussion (PAD) class is a teaching theory and mode proposed by Professor Xuexin Zhang of Fudan University on the basis of China's actual education situation and problems. In short, "the core concept of a PAD class is to allocate half of the class time to teachers and the other half to students for interactive learning in the form of discussion"^[1]. In this process, the teacher should not only teach the knowledge, but also give appropriate guidance during student discussion, and observe students' learning situation to obtain the corresponding process evaluation. The application of this teaching mode in high school teaching is conducive to breaking through the traditional teaching mode, promoting the transformation of the roles of teachers and students, effectively improving the affinity and pertinence of classroom teaching in high school, and promoting the formation of core literacy of subjects^[2].

2. The necessity of applying the PAD class teaching mode to senior high school teaching

The pedagogical theoretical support of the PAD class teaching mode mainly includes behaviorism,

humanism, cognitivism, and constructivism, and embodies the main principles of three teaching theories: inquiry learning theory, nearest development area theory, and case teaching. These characteristics of learning from all the strengths not only contribute to theoretical advantages but also effectively respond to the requirements of the transformation of modern talent training mode, match the needs of the cultivation of core subject literacy in senior high school teaching, and promote the ecological optimization of classroom teaching.

2.1. The practical needs of the transformation of talent training mode

With the rapid development of the social economy and the continuous adjustment of industrial structure, the demand for talents in contemporary society is also constantly changing, and it is urgent to cultivate compound talents with the ability to find and solve problems in complex scenarios^[3]. At the same time, with the progress of science and technology and the development of information technology, the trend of digital transformation of education is becoming increasingly obvious^[4], and students' learning styles and needs are also changing, so it is necessary to constantly innovate teaching methods and means.

At present, the cultivation of core subject literacy has gradually become the main goal and focus of senior high school teaching. The new curriculum standards emphasize the shaping of high school students' emotions, attitudes, and values, and advocate open and interactive teaching methods and cooperative and exploratory learning methods^[5]. In addition to ensuring that teachers play a leading role, a PAD class can also ensure the enthusiasm and participation of students, so that students can participate in the discussion and interaction of relevant knowledge with a positive and active attitude, giving full play to students' intelligence and wisdom. This is undoubtedly highly conducive to the cultivation of students' creativity, independent thinking, and problem-solving skills.

2.2. The inevitable choice for the implementation of the core subject literacy

The concept of "core literacy" was put forward in the Opinions on Comprehensively Deepening Curriculum Reform and Implementing the Fundamental Task of Cultivating Virtues and Talents issued by the Ministry of Education in 2014^[6]. "It clarifies the essential qualities and key skills that students should possess to meet the needs of lifelong development and social development, emphasizes personal cultivation, social care, family and national feelings, and pays more attention to independent development, cooperation and participation, and innovative practice"^[7]. The cultivation of core qualities has become an important basis for curriculum reform. After the publication of the new curriculum standards in 2017, the learning mode of "independent, cooperative, and exploratory," which aims to cultivate students' innovative spirit and practical skills, has been increasingly widely adopted^[8].

The Curriculum Plan for Ordinary Senior High Schools (2017 edition) points out that "refining the core literacy of subjects is based on the consensus on the nature and characteristics of the curriculum of each subject"^[9]. Taking the political discipline as an example, its core literacy mainly includes four key elements: political identity, rational spirit, awareness of the rule of law, and public participation^[10]. Obviously, rather than simply imparting subject knowledge, these core qualities emphasize the cultivation of students' skills and personalities.

Based on problem orientation and independent cooperative exploration as the basic learning mode, the main functions and training objectives of the PAD class are consistent with the requirements of the reform of the college entrance examination and the cultivation of core literacy of subjects under the new curriculum

standards. After sorting out the knowledge framework and general content, teachers let students process and digest the knowledge, and encourage them to consult relevant literature and combine it with book knowledge. In the discussion and communication process, students take the initiative to share their knowledge and opinions about the knowledge point, and exchange with other students to get more materials about the knowledge point, so as to broaden their horizons, deepen their understanding of the knowledge point, improve their awareness of public participation, and gradually train students to enhance their understanding of the subject, which is conducive to promoting the implementation of the core quality of the subject and achieving teaching empowerment.

2.3. Effective plans for ecological optimization of classroom teaching

“Classroom ecology is a special ecology”^[11], which is composed of different individuals such as teachers, students, teaching environment, teacher-student relationship, and the relationship between individuals. The core values of the ecological classroom are to pay attention to the internal connection, emphasize the overall connection, advocate dynamic generation, and respect the pluralistic opening^[12]. Under the traditional classroom teaching mode, teachers teach knowledge in one direction and students accept it passively, which fails to transform knowledge^[1]. However, in the PAD class teaching mode, the mechanical component is reduced, the instructional component is increased, and the role of teachers is changed from covering content and instilling knowledge to guiding students’ learning.

The new curriculum standard reform requires teachers to be the guides of students’ learning and the facilitators of students’ development. In the form of the PAD class, students are fully involved in the classroom teaching process through questions, dialogues, listing common cases in life, group discussions, interactive question-and-answer between teachers and students, etc., so as to organize and reconstruct knowledge and absorb it individually. It highlights the principal position of students in the teaching process, ensures that students give play to their subjective initiative while teachers play a leading role, and maximizes the role of both. In the teaching process, a positive relationship between teachers and students is formed, so that different subjects and factors in the classroom ecology coordinate operation, and ensure the contact between each other while performing their duties.

3. The practice path of applying the teaching mode of PAD class to senior high school teaching

The application of the PAD class mode in senior high school teaching needs to follow certain steps and methods. Firstly, it constructs the logical framework of the teaching content through knowledge teaching; the “blank” parts are completed by students through completing homework and participating in group interactive practice. Finally, through the deepening way of answering questions, students can solve their problems while passing on the correct values.

3.1. Knowledge teaching

In the PAD class mode, students “change from a passive listener to an active participant in learning”^[13]. Therefore, it is different from the traditional teaching mode, the teacher’s teaching should be appropriate and give students enough space for independent thinking. In high school teaching, it is generally appropriate to take the core concept of the theme as the center and plan the teaching content. The teaching of teachers should focus on the core concept of the theme to carry on the essential interpretation and build a good

knowledge frame; then put forward guiding questions to make the “white space” manifest, so as to guide students to start independent learning of other important concepts and basic concepts, instead of transferring knowledge all at once, so as to exercise students’ thinking and enable students to master relevant knowledge better and faster.

3.2. Internalization and absorption

Assignments are key teaching tools for internalization and absorption. Well-designed and thoughtfully assigned tasks are essential for encouraging students to engage in self-directed learning. In senior high school education, it is crucial to consider students’ developmental stages and align assignments with their physical and mental growth needs. Building activity-based curricula grounded in real-life contexts and focused on cultivating core subject skills creates meaningful, relevant learning experiences that enhance student engagement and foster a deeper understanding of the material ^[14]. While the homework design conforms to the curriculum standards of high school, it should integrate the materials closely related to students’ daily lives. By completing these assignments and tasks, students can understand and digest the knowledge and some questions may be raised, which can be addressed in group discussions and communication between teachers and students.

3.3. Mutual assistance learning

The PAD class model encourages students to engage in group discussions and collaborative learning. Teachers play a key role in guiding this process, promoting a progression from individual reflection to team-based thinking exercises. To implement this approach effectively, particular attention should be given to ensuring meaningful group discussions. While high school students often have active, engaged minds, they are still in the adolescent phase, and without well-structured discussions, group activities may risk becoming superficial and fail to prompt deep thinking. Teachers should consider structured discussion formats and carefully design each aspect of the group interaction: group formation, discussion methods, task segmentation, division of roles, and presentation of conclusions. This detailed approach enhances the productivity of group work and fosters deeper learning. Moreover, group learning need not be restricted to traditional discussion formats but can be adapted creatively to include activities such as role-playing or experiential learning, depending on the material.

3.4. Discussion and communication

Teachers’ guidance to group members and teacher-student communication are vital parts of the “peer-to-peer classroom.” Teachers should act as facilitators, listening attentively to students’ inquiries and using their experience to gently guide students through a process of critical thinking and discovery, allowing them to arrive at answers step by step.

4. The application of PAD class teaching mode in senior high school teaching

4.1. Concept level: Teachers’ understanding and execution of the PAD class model

Teachers play a central role in facilitating the PAD class model, which requires them to have a comprehensive understanding of the method to guide students effectively. While a portion of class time is set aside for students to process new knowledge through discussion and collaboration, this approach does not reduce teachers’ responsibilities. During lesson preparation, teachers need to consider discipline-

specific characteristics and tailor their approach accordingly. In class, teachers should encourage student engagement and focus by employing diverse strategies that maintain students' attention. Once students begin group discussions, teachers are advised to participate selectively to maintain an organized flow and encourage thoughtful inquiry. Additionally, when assessing students' performance, teachers should focus on participation, learning progress, and engagement, using these observations to provide individualized feedback and evaluations.

4.2. Operation level: Refining the classroom process for clear and effective implementation

The PAD class model requires a well-structured and precise classroom implementation process. Teachers should clarify each step of the process to ensure the class operates smoothly. During instruction, teachers should present the essential knowledge frameworks, key concepts, and challenging areas while allowing students the opportunity to internalize and personalize this information. To support this, teachers can assign varied and open-ended assignments that promote deeper understanding, enabling students to build on the core content. In group discussions, teachers need to ensure that groups complete their designated discussions within the allocated time, fostering an environment for independent exploration and promoting student autonomy in learning. Through these steps, the PAD class model becomes a powerful approach to enhance students' understanding and retention of knowledge.

4.3. Goal level: Aligning education and subject goals

Senior high school education must balance achieving subject-specific outcomes with broader educational objectives that encompass students' moral, intellectual, physical, aesthetic, and labor development. While subject goals are often specific, educational goals tend to be more implicit, supporting the holistic development of students through the integration of these five educational elements. Under high academic pressures, both teachers and students may prioritize subject achievements, risking the neglect of these broader goals. To align these goals effectively, the PAD class model serves as a valuable platform for integrating comprehensive educational objectives into subject teaching. This approach allows teachers to promote students' individual development while emphasizing interdisciplinary connections, innovation, and a holistic evaluation of student growth. By fostering unity between subject and educational goals, high school teaching can better support students' core competencies and overall development.

5. Conclusion

The PAD class teaching model addresses the evolving needs of talent development by enhancing the classroom environment and fostering core subject literacy through dynamic interaction. Moving forward, improving the effectiveness of this model will involve creating incentive mechanisms, strengthening oversight, offering personalized evaluations, and providing ongoing professional development for teachers. These steps will help fully realize the potential of the PAD class model in senior high school education, enhancing both subject mastery and comprehensive student growth.

Disclosure statement

The author declares no conflict of interest.

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