

The Construction Strategy of Precision Teaching Method for Ideological and Political Courses in Chinese Colleges and Universities

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Abstract: The precision teaching method for ideological and political courses in Chinese colleges and universities is a teaching method that is opposite to the extensive teaching method. It refers to the teaching method that accurately divides and dynamically adjusts the curriculum links such as online teaching, classroom teaching, and social practice based on a precise understanding of the situation and needs of the teaching objects, and implements differentiated teaching in a targeted manner to achieve teaching objectives. The core issue that needs to be addressed in constructing precise teaching methods for ideological and political courses in colleges and universities is to determine operating rules and procedures. The fundamental purpose of constructing the precision teaching method for ideological and political courses in colleges and universities is to break the current dilemma of implementing targeted and differentiated precision teaching based on a clear understanding of the characteristics and needs of all educators, and achieve personalized precision teaching and precision education. The precision teaching method can and should be integrated with various existing teaching methods to form a system of precision teaching methods such as precision case teaching method and precision thematic teaching method.

Keywords: Chinese colleges and universities; ideological and political theory courses; precision teaching method; strategy

1. Introduction

The ideological and political theory courses(IPTC) in Chinese colleges and universities relating to the fundamental issue of "who to cultivate, how to cultivate, and for whom to cultivate" are not only a key course to implement the fundamental task of cultivating morality and talents, but also a main channel for ideological and political education for college students. Constructing and optimizing teaching methods is considered an important path and strategy to solve the fundamental problem of "teaching" and "learning" in ideological and political education, thereby improving teaching efficiency. After years of teaching practice exploration and theoretical research, on the one hand, ideological and political course teachers have borrowed and transformed from multiple disciplines such as education to construct more than ten teaching methods, including classroom teaching method, heuristic teaching method, participatory teaching method, exploratory teaching method, thematic teaching method, case teaching method, practical teaching method, multimedia teaching method, psychological method, artistic method, etc.[1], and have played a positive role in improving the effectiveness of ideological and political course teaching. On the other hand, various teaching methods have always faced varying degrees of difficulties in implementing targeted personalized and differentiated precision teaching based on a clear understanding of the characteristics and needs of all learners in teaching practice, and even experienced varying degrees of "failure". In this regard, the academic community believes that precise and intelligent ideological and political education is the fundamental development trend of ideological and political education [2], and the precise teaching supported by Big data is just a powerful solution to the current "flood" teaching dilemma of IPTC, and realizes the function of precise education. So, can various existing ideological and political course teaching methods and precise teaching theories be organically combined to form a more general system of precise teaching methods

for IPTC in colleges and universities? If possible, then how to construct it? In view of this, this article attempts to answer the above questions and construct a precise teaching method for IPTC in colleges and universities with Chinese characteristics to improve teaching efficiency.

2. The Evolution and Connotation of Precision Teaching Theory

The concept of Precision Teaching was first proposed by American scholar Ogden R. Lindsley in the 1960s based on Skinner's behaviorism theory. It serves as a framework for evaluating the effectiveness of specific teaching methods, used to track students' learning performance and support data decision-making.[3] The decision-making basis is the Standard Acceleration Charts, which are recorded and drawn by both teachers and students during the teaching process using a pencil to draw points.[4] Precision teaching takes Fluency as the main indicator of students' learning and development.[5] There are four steps to success: Pinpoint, Chart Daily, Change, and Try Again.[6] Precision teaching has achieved success in the field of special education, ordinary primary school classrooms, mathematics and Chinese reading teaching in middle and high schools, and has demonstrated in many verifiable teaching cases that it can better enhance students' learning performance and sense of achievement compared to traditional teaching practices.[7] However, due to the lack of technology and the limitations of behaviorism at that time, as well as the unwillingness of teachers to spend extra energy researching how to integrate it into existing teaching, and the hope of using ready-made teaching models, precision teaching gradually became neglected, and foreign public schools did not widely adopt it. There were also few people interested in it domestically, and research progress stagnated.[8]

In recent years, with the development of information technology, precision teaching supported or driven by Big data and precision teaching in the context of smart education have gradually become the focus and hot spot of academic attention and research at home and abroad. The precision teaching supported by Big data has broken the stereotype that precision teaching is only an evaluation method [7], and has become a personalized teaching method oriented to efficient knowledge. Precision teaching and personalized chemistry achieve mutual integration, and its core mechanism is measurement assisted learning [9]. The so-called precision teaching supported or driven by Big data refers to the precise positioning of teaching objectives, precise customization of teaching content, precise design of teaching activities, precise evaluation of students' learning performance and precise teaching decisions based on the precise analysis of students' academic status by means of Big data technology, so that the teaching process and teaching results can be quantified, monitored and regulated. The premise of accurate teaching driven by Big data is massive teaching Big data - these teaching Big data are composed of structured, semi-structured, unstructured and other types of data sets generated in all aspects of teaching and learning, and are records of students' process and immediate learning behavior and performance.[10] The core of precision teaching driven by Big data is precision learning analysis, including precision mining of learning data, precision evaluation of learning performance and precision teaching intervention based on learning data.[11]

Academics agree that Big data provides opportunities and conditions for new development of precision teaching. With the help of Big data intelligent education system, the data measurement, recording and decision-making of precision teaching become more accurate and true; By collecting data on students' learning behavior throughout the entire process and accurately identifying each learner's personalized learning needs and characteristics, differentiated teaching can be achieved.[12] In addition, the combination of Educational Data Mining and Learning Analytics can enable precise teaching to more accurately analyze students' needs and characteristics, accurately mine and deeply analyze historical learning data, and accurately evaluate the learning process, identify potential problems, and predict future performance. Precision teaching and smart teaching are closely linked, and precision teaching can serve as an efficient teaching method in the smart learning ecosystem, supporting the development of smart education in terms of accuracy and mastery, together with proficient learning. The precision teaching supported by Big data includes four links: accurately determining goals, developing materials and design activities, measuring and recording performance, and data decision-making.[13] Compared with the early precision teaching, there are new developments in theory, technology, and methods. The new method is mainly reflected in the shift from the use of standard variable speed charts to the use of Big data technology.[14] In this context, the precise teaching method of IPTC in universities has the foundation and conditions.

3. Constructing the Operational Process of Precision Teaching Method for IPTC in Colleges and Universities

Teaching methods are the operational rules (overall guiding ideology) and procedures (operational steps) adopted by teachers and students under the guidance of certain theories, and the interaction between teaching and learning, in order to achieve teaching objectives. The core issues of teaching methods are operational rules (overall guiding ideology) and procedures (operational steps)[15]. (As shown in Figure 1).

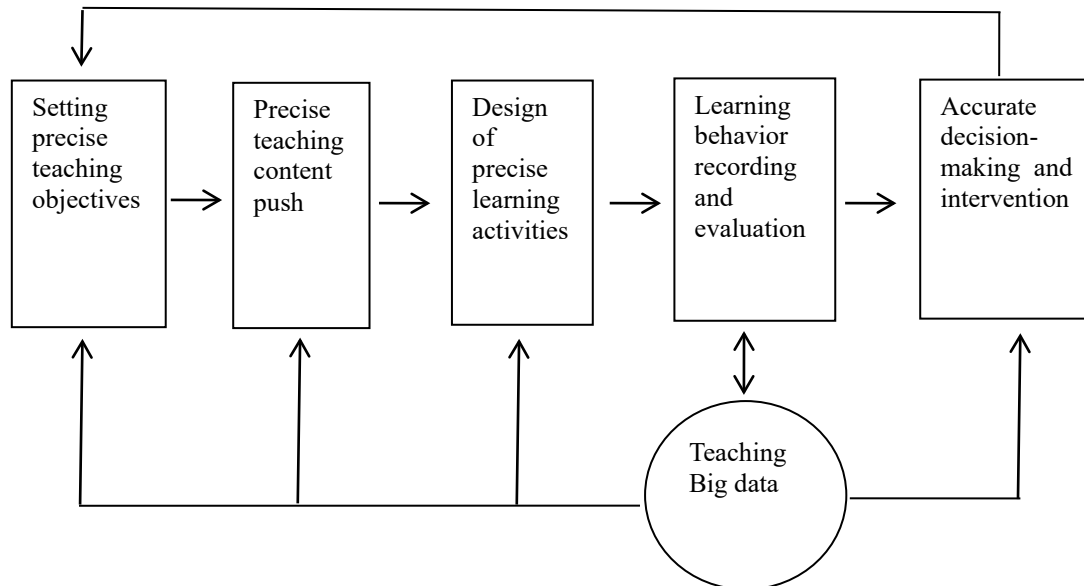


Figure 1: Operation process of precision teaching method supported by Big data

Precision teaching is a teaching form that accurately adjusts teaching activities to improve learning performance by recording and analyzing data and changes in learners' learning behavior, performance, and other aspects.[16] The general process of precision teaching supported by Big data is to set teaching goals → organize and deliver teaching content → design learning activities → evaluate and feedback learning results.[10] In the operation process of precision teaching method, precision portrait is the logical starting point. This teaching method uses appropriate techniques to generate personalized and precise teaching objectives, develop appropriate teaching materials, design appropriate teaching activities for teaching, and frequently measure and record learners' learning performance to accurately determine the current and potential problems that learners have. In response to the identified problems, appropriate data decision-making techniques are used to accurately optimize and intervene in teaching strategies.[9] A comprehensive and accurate understanding of the ideological and behavioral trends of the educated is the premise and foundation of ideological and political education.[17] Accurately grasping the characteristics and needs of the object and achieving accurate user profiling is a prerequisite for enhancing the pertinence and effectiveness of ideological and political education.

3.1. Using Big data for accurate portrait and classification

Relying on various platforms inside and outside the school, online learning platform background management technology, web log collection technology, web crawler collection technology and other technologies are used to collect teaching Big data, so as to accurately, quickly, objectively, comprehensively and truly grasp students' learning behavior, learning habits, learning content, interactive behavior, learning results, learning attitude, learning motivation and other data. Learning preferences, learning expectations, learning abilities, academic performance, learning needs, psychological state, activity level, interests, knowledge structure, academic level, outstanding advantages, main weaknesses, ideological maturity, personality preferences, cognitive characteristics, aesthetic characteristics, and other information, forming a portrait of each student. The overall portraits of students in a specific teaching class and the clustering analysis of students in the same teaching class, as well as the full sample portraits, dynamic portraits, visual portraits, and intelligent portraits of different student groups[17], help teachers overcome the misconceptions of "understanding" students, break through the limitations of traditional small data situations such as sampling surveys, experience

perception, and teaching observation, and focus teaching activities more on core demands and common needs Differentiated needs and learning pain points, identifying the foothold and direction of teaching, minimizing ineffective teaching, enhancing teaching efficiency, and providing objective basis for the smooth implementation of precision teaching activities and precision development.

On the basis of precise profiling, students are dynamically grouped into homogeneous and heterogeneous groups [10]. Students with different profiling are automatically assigned to different categories of classes, such as basic classes, catch-up classes, reinforcement classes, interest classes, innovation classes, etc. According to the dynamically monitored data, classes are adjusted accurately every semester or half a semester to give students a space for motivation, breaking the existing construction method of creating IPTC based on students' independent selection of indiscriminate courses or by majors or colleges.

3.2. Accurate positioning of teaching objective system

Accurately depict the teaching objects, set teaching objectives accurately, and select appropriate specific teaching methods based on this. Set different teaching objectives for different classes, form an accurate teaching objective system, and provide preparation for different specific teaching activities. The setting of precise teaching objectives essentially involves establishing an accurate mapping relationship between learner characteristics and teaching expectations.[10] Make the teaching objectives of each class and class actionable and quantifiable. Clear, specific, and clear teaching objectives replace vague and general teaching objectives. Abandon vague teaching objectives with strong cognitive flexibility, such as "understanding", "learning", "understanding", and "mastering".

3.3. Precision teaching in various teaching stages

Under the precise teaching framework supported by the Internet and Big data, the IPTC can be divided into four teaching links: online teaching, classroom teaching, social practice, and online push. On the basis of the above precise portrait, precise classification, and precise teaching objectives, each teaching link is divided into precise tasks according to the different situations and needs of different teaching objects, and precise teaching is implemented. To achieve a revolutionary transformation from "flood irrigation" to "precision drip irrigation" in various stages of teaching. Let online teaching and classroom teaching organically integrate and support each other, and organically interact with teaching and learning. Targeting students of different categories and classes, we will work accurately to break the main and auxiliary relationship between online teaching and classroom teaching. We will adopt different combination methods of teaching strategies for students with different situations and needs, and achieve teaching goals accurately.

4. Conclusions and Discussions

In summary, it can be seen that the precision teaching method can and should be organically integrated with various existing teaching methods, forming precision case teaching methods, precision thematic teaching methods, and other precision teaching methods for IPTC in Chinese colleges and universities. Once the precision teaching method of IPTC is effectively implemented, the precision teaching will lead to a revolution in the teaching of IPTC and even all courses nationwide, making the IPTC in colleges and universities from effective teaching to the promotion of charm teaching.

When implementing precision teaching, there are systemic issues such as ethical and institutional gaps in the protection of privacy data information. Therefore, it is necessary to gradually advance in stages according to the "pilot - promotion" method. Accurate teaching is not only the pursuit of IPTC, but also the common value pursuit of all courses. In terms of Big data collection, processing, sharing and other aspects, we can consider, plan and promote the overall precision teaching in colleges and universities, and further improve the top-level design.

Of course, the research on precise teaching methods for IPTC in colleges and universities has just begun. This article only proposes the overall strategy for constructing precise teaching methods for IPTC in colleges and universities from a macro perspective. To promote the transformation of this teaching method from theory to practice, there are still many issues that need further in-depth research and analysis by the academic community. Many issues need further in-depth research, such as which specific indicators of fluency are used as the main indicators of the precision teaching method of IPTC, the long cycle assessment model of the multi subject whole process under precision teaching, the

contradiction between Big data collection and processing and personal privacy protection, the construction of Big data analysis platform, how precision teaching is combined with existing teaching at the micro level, the construction of a multi subject collaborative precision teaching mechanism under the great framework of ideological and political education, and the transformation of IPTC through standard variable speed charts.

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