Reconstruction and Practical Exploration of Teaching Objectives Under the Guidance of Subject Core Literacy

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Abstract

Based on the guidance of subject core literacy, a scientific and practical teaching goal system is constructed. By reshaping teaching goals, the teaching practice path is optimized and the development of students' subject core literacy is promoted. Using the methods of literature interpretation, case investigation and practical verification, an in-depth study is conducted on the transformation of teaching goal concepts, setting adjustments and implementation paths, and a strategy for seamless connection between subject literacy and teaching goals is proposed. Verified by teaching practice, the optimized goal system can more effectively guide students to achieve comprehensive improvement in knowledge acquisition, skill training and literacy improvement, and significantly improve the quality of subject core literacy education.

Keywords

Subject Core Literacy, Teaching Goal Reconstruction, Literacy Orientation, Teaching Practice, Comprehensive Development

1. Introduction

With the continuous deepening of education reform, subject core literacy has gradually become the main goal of cultivating students' comprehensive abilities. How to integrate subject core literacy into teaching goals has become a key issue that needs to be solved in educational practice. Traditional teaching goals focus more on knowledge transfer and lack the cultivation of literacy, making it difficult to comprehensively improve students' comprehensive level [1]. By reconstructing and optimizing teaching objectives, and integrating the core competencies of the subject into the classroom, it is helpful to guide students to develop in a balanced way in terms of knowledge, ability and literacy, and provide a new practical plan for improving the quality of subject teaching.

2. The Connotation of Core Competencies of the Subject and the Necessity of Reconstructing Teaching Objectives

2.1 Overview of Core Competencies of the Subject

Core competencies of the subject are the comprehensive abilities that students should possess in the process of education in a specific subject, and are an important guiding concept for education reform in the new era [2]. Core competencies not only focus on students' mastery of subject knowledge, but also attach importance to their application ability and thinking literacy demonstrated in practical activities. Taking the subject of Chinese as an example, core competencies cover four aspects: language construction and application, thinking development and improvement, aesthetic appreciation and innovation, and cultural inheritance and understanding; the core competencies of mathematics mainly include mathematical abstraction, logical reasoning, mathematical modeling, calculation ability, data analysis and mathematical expression.

Under the background of the new curriculum reform, core competencies of the subject have become the core concept and practical guide for leading education and teaching reform. Cultivating core competencies helps to promote students' all-round development more efficiently and cultivate their independent thinking, problem-solving and innovative practical abilities. It is an inevitable trend to integrate the core competencies of the subject into the teaching objectives. How to effectively reflect this concept in the teaching design has become a key issue that needs to be solved urgently.

2.2 The Necessity of Reconstructing Teaching Objectives

Traditional teaching objectives focus more on knowledge inculcation and skill mastery, and ignore the cultivation of students' core competencies in the learning process. Its limitations are mainly reflected in the following aspects: first, the objectives are single, focusing on the mastery of knowledge points and lacking in competence cultivation; second, the operability is insufficient, the teaching design is difficult to highlight the competence orientation, and it is impossible to effectively evaluate the improvement of students' comprehensive abilities; third, it is out of touch with reality, and the objectives do not match the actual ability cultivation of students. In the context of the increasing attention paid to competence education, reconstructing teaching objectives is of great significance [3]. The

reconstructed teaching objectives can achieve an organic combination of knowledge, ability, and competence, and are more in line with modern educational concepts. The new objectives can guide teaching design and classroom practice, and encourage teachers to pay attention to competence cultivation and development in teaching. By integrating teaching objectives, it can also promote the transformation of teaching evaluation methods, make the evaluation results more scientific and comprehensive, and truly reflect the improvement level of students' core competence.

2.3 Reconstruction Principles and Strategies

To ensure that the reconstruction of teaching objectives is scientific and effective, the following principles must be followed:

(1) Goal orientation: clarify the subject literacy training objectives and enhance the guiding role of teaching objectives. Use core literacy orientation to set goals and guide students to focus on improving their abilities and developing comprehensive literacy while learning knowledge.

(2) Comprehensive content: When reconstructing teaching objectives, not only should basic knowledge be taught, but also ability training and literacy cultivation should be taken into account. Through the integration of knowledge, ability and literacy, the comprehensive and balanced achievement of educational objectives can be achieved.

(3) Practical operability: The reconstructed teaching objectives must be highly practical and can be implemented in teaching activities. When setting goals, attention should be paid to result orientation and effect evaluation, which can be scientifically verified through a variety of teaching evaluation methods.

3. Methods for Reconstructing Teaching Objectives under the Guidance of Subject Core Literacy

3.1 Concept Transformation: Literacy-Centered

Under the guidance of subject core literacy, the reconstruction of teaching objectives must first change the concept, from traditional knowledge transfer to literacy cultivation. This requires teachers to abandon the concept of single knowledge indoctrination in teaching practice and establish the educational concept of "cultivating students' comprehensive qualities". When teaching, teachers should focus on guiding students to transform knowledge into the ability to solve practical problems, and move from single skill training to comprehensive ability cultivation. For example, in Chinese teaching, it is necessary not only to cultivate students' reading and writing skills, but also to pay attention to the formation of language expression, cultural understanding and critical thinking.

In the process of concept transformation, attention should also be paid to the integration of learning areas. Core literacy emphasizes the systematic and comprehensive nature of knowledge. Teachers should optimize and reconstruct teaching modules according to the requirements of subject literacy, and organically integrate knowledge, skills and literacy. Taking mathematics as an example, "number and operation" and "logical reasoning" can be combined to improve students' mathematical operation ability and logical reasoning ability by creating problem situations, so as to achieve the coordinated development of multi-dimensional literacy. Through the change of concepts, teachers can more effectively reflect the core literacy orientation when designing teaching objectives, avoiding the problems of single target content and one-sided knowledge cognition.

3.2 Goal Setting: Integration of Knowledge and Literacy

Under the guidance of subject core literacy, teaching goal setting needs to achieve a deep integration of knowledge and literacy [4]. In terms of goal expression, we should get rid of the traditional expression method centered on knowledge points and reflect more literacy requirements. For example, in Chinese teaching, we should not only set "mastering rhetorical techniques and their application", but should clearly state "using rhetorical techniques to enhance persuasiveness when expressing opinions". This statement not only focuses on knowledge mastery, but also attaches more importance to the cultivation of practical expression ability.

In terms of the integration of skills and literacy, we should emphasize the mutual promotion of knowledge and skills practical application and comprehensive literacy. For example, in mathematics teaching, "problem-solving ability" is taken as one of the core literacies, combined with logical reasoning ability, and challenging mathematics activities are designed to cultivate students' comprehensive ability to analyze and solve problems in mathematical contexts. In science subjects, experimental operation skills and scientific inquiry literacy are integrated. Through problem-guided experimental activities, students are encouraged to explore scientific principles and laws in practice, and their scientific literacy and practical ability are improved. Goal setting must also be flexible and operational, not only to meet the needs of mastering basic knowledge, but also to promote the development of students' innovative thinking and critical thinking, and to achieve a deep integration of knowledge learning and literacy cultivation.

3.3 Implementation Path: Promoting the Combination of Theory and Practice

The core of the reconstruction of teaching objectives lies in the reasonable planning of practical paths, that is, how to implement literacy-oriented goals in teaching activities. In teaching design, teachers should design activities and situations with subject literacy as the core. For example, in English classes, role-playing and topic discussions are used to improve students' language expression ability and cross-cultural understanding literacy. Through activity design, students can apply knowledge in actual situations, and achieve a close combination of ability transfer and literacy

cultivation.

Teaching evaluation should focus on the combination of formative evaluation and summative evaluation. Under the literacy orientation, the evaluation method needs to shift from single score evaluation to multi-evaluation, covering dimensions such as classroom performance, activity participation, and comprehensive ability improvement. For example, in physics experiment teaching, we should not only pay attention to the accuracy of experimental results, but also pay attention to the rationality of experimental design and the scientific nature of the analysis process. Through the combination of periodic evaluation and summative evaluation, the development of students' literacy can be fully presented.

The practice of reconstructing teaching objectives also needs to strengthen the interactive feedback mechanism between theory and practice. Through post-class reflection and case analysis, we can summarize the experience and shortcomings in teaching practice, continuously optimize the setting and implementation path of teaching objectives, and improve their practicality and scientificity. Reconstructing teaching objectives is not only a change in concept, but also a deep exploration of practice. Only by organically combining theory and practice can we effectively improve students' core literacy.

4. Practical Cases of Reconstructing Teaching Objectives under the Guidance of Subject Core Literacy

4.1 Case 1: Reconstruction of Teaching Objectives of Core Literacy of Chinese Subject

In junior high school Chinese teaching, traditional reading teaching objectives focus on understanding the content of the text and mastering rhetoric, while ignoring the cultivation of students' cultural understanding and language application ability. This knowledge-based teaching model leads to passive classroom learning for students, lack of independent exploration of the deep connotation of the text and cultural awareness cultivation.

In order to effectively improve core literacy, the reading teaching objectives are reconstructed. In the teaching design, "cultural understanding" and "pragmatic ability" are clearly listed as important goals of reading teaching. In teaching practice, texts with cultural connotations, such as classical poetry, prose and modern works with national characteristics, are selected to lead students to feel the cultural heritage of the text through situational guidance.

When explaining "Peach Blossom Spring", classical music is played and landscape paintings are displayed to create an immersive atmosphere and trigger cultural resonance among students. Raise an open question such as "Why did Tao Yuanming create an ideal world isolated from the world?" Organize students to discuss and debate, and guide students to write their thoughts from different perspectives, such as "The reference significance of Taohuayuan to modern life", to improve students' language expression and cultural reflection ability.

Through goal reconstruction, students in reading teaching are no longer limited to literal understanding, and gradually form an identification with the cultural value of the text. In the diversified expression training, students' pragmatic ability is significantly improved, and they can flexibly use reading knowledge to express opinions and cultural analysis, and their academic performance is greatly improved.

4.2 Case 2: Reconstruction of Teaching Objectives for Core Literacy in Mathematics

In primary school mathematics teaching, calculation teaching usually focuses on formula mastery and mechanical exercises, and ignores logical reasoning and number sense cultivation. This makes students proficient in calculation, but often at a loss when facing practical problems, and lacks the ability to flexibly use mathematical knowledge.

In the reconstruction of mathematics teaching objectives, adjustments are mainly made around "problem-solving ability" and "number sense cultivation". In the design of teaching activities, mathematical exploration tasks are added to help students understand mathematical concepts in specific situations through operational experience and problem-solving.

In the teaching of "addition and subtraction of fractions", create a "mixing beverage" scenario: mix different juices in proportion, and guide students to calculate the ratio using fraction addition and subtraction. Combined with real-life examples, such as calculating household water consumption, let students compare the calculation results with the actual situation to enhance their sense of numbers and awareness of mathematical application. Set up a "sharing the problem-solving process" session, where students display their problem-solving ideas on the blackboard, and other students evaluate and improve them, and jointly improve their logical reasoning ability.

Under the guidance of the new goal, students can flexibly use mathematical knowledge for calculation and analysis, and show strong independent inquiry ability and mathematical logical thinking ability in practical problem situations. Compared with traditional single calculation training, the teaching effect after goal reconstruction is more practical.

4.3 Case 3: Reconstruction of Teaching Objectives for Core Literacy of Scientific Disciplines

Middle school physics experimental teaching has traditionally focused on the correctness of experimental results and neglected the cultivation of scientific inquiry literacy. Students often imitate mechanically during experiments, lacking understanding of experimental principles and cultivation of inquiry spirit.

Reconstruct the experimental teaching objectives, take "scientific inquiry literacy" as the core goal, and emphasize

process experience and inquiry ability cultivation. In experimental teaching, we should reduce excessive attention to the correctness of experimental results and strengthen guidance on experimental design, operation process and result analysis.

In the "Exploring the Size of Friction" experiment, the experimental steps are not given directly, but students are asked to design solutions independently, such as selecting different materials and force conditions, and trying different measurement methods. After the experiment, guide students to reflect on the sources of experimental errors and improvement methods, and conduct critical analysis of the experimental results. Through group exchanges and results presentations, students share experimental design ideas and data processing skills, and learn from each other.

Students show stronger independent exploration and scientific thinking ability in experimental teaching, and can understand the physical principles behind experimental phenomena. Compared with traditional teaching, students not only master experimental operation skills, but also cultivate a scientific attitude of questioning and verification, and their scientific literacy is significantly improved.

5. Evaluation and Reflection on the Effect of the Reconstruction of Teaching Objectives

5.1 Effect Evaluation

(1) Student Development Dimension: Improvement of Core Literacy Level

Reconstructing teaching objectives with subject core literacy as the guide has significantly promoted the development of students' core literacy. In teaching practice, students have shown stronger thinking and practical abilities. In the subject of Chinese, students can not only accurately understand the text, but also express their opinions through independent exploration, reflecting a high level of language expression literacy and cultural understanding ability. In the subject of mathematics, the reconstructed objectives focus on problem solving and the cultivation of mathematical sense. Students can flexibly use knowledge to solve practical problems in classroom discussions and case analysis, and their mathematical thinking and logical reasoning abilities are significantly enhanced.

In the subject of science, through the reconstruction of experimental teaching objectives, students' initiative and spirit of inquiry in mastering operational skills have been significantly improved. In the process of experimental data analysis and design, students can comprehensively use knowledge and skills to conduct scientific argumentation and reasoning, showing a high level of scientific literacy.

(2) Teaching Quality Dimension: Improvement of Classroom Participation and Learning Effect

The reconstruction of teaching objectives has effectively improved the quality of classroom teaching, which is most evident in the significant increase in students' enthusiasm for classroom participation. Under the guidance of literacy-oriented objectives, classroom teaching activities are more diverse and interactive. For example, the teaching design of the subject discussion of Chinese, the situational task of mathematics, and the experimental exploration of science allow students to actively participate in practice and experience, which fully mobilizes their enthusiasm for learning.

The classroom learning effect is significantly improved due to the optimization of teaching design through goal reconstruction. After the Chinese reading teaching incorporates the cultural understanding goal, students have a deeper understanding of the text and enhance their expression ability; the mathematical calculation teaching is combined with logical reasoning training, which improves students' calculation accuracy and complex problem analysis ability; in the scientific experiment course, students actively analyze experimental problems and seek improvement methods, and the learning effect is significantly improved.

5.2 Practice Reflection

(1) Challenges and Countermeasures: Teacher Concept Renewal and Teaching Design Ability Improvement

The implementation process of teaching goal reconstruction faces many challenges. The core problem is that teachers' concept renewal lags behind. Some teachers still use the traditional knowledge-based teaching goals in actual teaching, which makes it difficult to effectively implement the literacy orientation [6]. To solve this problem, it is necessary to carry out teacher training and teaching research activities to help teachers deeply understand the connotation of subject core literacy and master the methods and strategies of teaching goal reconstruction.

Improving teaching design ability is the key to ensuring the implementation of goal reconstruction. Some teachers have problems such as unreasonable activity design and vague evaluation standards when implementing literacy-oriented goals. Schools can organize special seminars and excellent case sharing activities to promote teachers to optimize teaching design through teaching and research exchanges. In teaching practice, a teaching evaluation mechanism based on core literacy should be established to ensure that goal reconstruction is scientific and feasible.

(2) Future Outlook: Improve the Goal Reconstruction System and Continuously Optimize it in Combination with Subject Characteristics

Although significant results have been achieved in the practical exploration of teaching goal reconstruction, there is still room for improvement. In the future, it is necessary to further refine the goal reconstruction strategy under the guidance

of core literacy in different subjects and formulate a more scientific implementation plan in combination with subject characteristics. At the same time, strengthen teacher teaching skills training to ensure that teachers are proficient in using the core literacy concept in teaching design and implementation.

Establishing a long-term mechanism is also a future improvement direction. By establishing a teaching goal reconstruction effectiveness evaluation mechanism, tracking the long-term development of students' literacy, and scientifically promoting teaching reform. Make goal reconstruction a normalized work of teaching reform, from systematic research results and practical cases, and promote the overall improvement of education quality.

6. Conclusion

Reconstructing teaching goals guided by subject core literacy is an important practical path to deepen education reform. Through concept transformation, goal optimization and practical exploration, the quality of classroom teaching and students' comprehensive literacy have been effectively improved. The reconstruction practice cases of subjects such as Chinese, mathematics, and science have verified the positive role of teaching goal optimization in literacy cultivation. The reconstruction of teaching goals still faces challenges such as changing teachers' concepts and improving teaching design capabilities. In the future, it is necessary to continuously optimize strategies in practice to promote the in-depth development of core literacy education.

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