

# The development process, main characteristics and practical enlightenment of learning and research—An investigation based on the relationship between teaching and study

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**Abstract:** Examining learning research from the perspective of the relationship between teaching and learning does not mean weakening teaching or advocating for replacing teaching with learning, but rather aims to deepen the understanding of the essence and value of learning within the changing relationship between teaching and learning. Using the changing relationship between "teaching" and "learning" as a framework to examine shifts in understanding of learning in the field of education and teaching, three stages can be identified: "learning" contains "teaching", "learning" follows "teaching", and "learning" guides "teaching". By exploring the essence of learning, understanding its core characteristics, and summarizing the logic behind learning cognition, this perspective enables educators to reconsider fundamental questions: Why do we learn and teach? What forms of learning shape teaching? How does teaching introduce new ways of learning? To deepen the teaching reform guided by core competencies, primary and secondary school teachers must establish teaching philosophies based on the relationship between learning and student development; Grasp the historical existence of learning and construct awareness of teaching history; Reflection on grounded teaching practices, seeking to surpass learning concepts.

**Keywords:** study research; nature of learning; primary and secondary school teachers; teaching reflection

## 1. Introduction

The theoretical development and practical innovation of education and teaching cannot be separated from the exploration of the original problems such as teachers' instruction, students' learning, and knowledge acquisition. Throughout the evolution of education and teaching research, the perspectives and problems examined have continuously shifted. However, knowledge learning within the teaching process has always attracted significant attention. In particular, a key direction of basic education curriculum reform in the era of core literacy is the reformation of teaching relationships. This reform emphasizes learning as the central focus, ensuring that core literacy is implemented in the classroom as a learning-centered model. Although they are originally two independent concepts, they are often linked as a singular activity. This association can sometimes overlook their independence and lead to a binary perspective on their relationship. Arguments such as "teaching-centered" versus "learning-centered" misinterpret the intricate interplay between teaching and learning, potentially guiding educational practice from one extreme to the other, resulting in teaching and practical confusion. As stated, "Every act of teaching must involve learning, and the commonly used compound word 'teaching-learning' in educational literature demonstrates this point, emphasizing that teaching and learning are intertwined and inseparable"[1].

## 2. The development process of learning and research

Learning and research have a distinct orientation toward the times, and its reform process reflects changing direction of the curriculum reform of basic education in China. Taking the evolution of the relationship between "teaching" and "learning" as a framework to examine changes in the understanding of learning within the field of education and teaching, this process can be summarized into three stages: "learning contains teaching," "learning follows teaching," and "learning guides teaching."

### ***2.1 Learning contains teaching, learning and teaching as one***

At the beginning of the birth of human civilization, the consciousness and customs of learning already existed, and the emergence of writing and the development of schools further consciousness and customs of learning already existed. Returning to the origin of learning, it can be found that "learning" originated in China, where a single word becomes a word, and is a Chinese concept that is native to China and carries traditional culture. The first educational monograph in China, "Xueji," focuses on "learning," viewing "teaching" as "learning" and integrating teacher instruction with student learning. The Confucian classic "Analects" directly begins with the phrase "learning" to showcase local educational wisdom. It can be seen that in the traditional field of education in China, the academic community's understanding of learning is open and inclusive. As a verb, "learn" refers to actions such as imitation, enlightenment, reading, research, and thinking. As a noun, it can describe learning activities, educational institutions, disciplines, knowledge, doctrines, schools, and even education itself. This demonstrates the reference scope and main direction of the construction of the learning concept at that time.[2]

Since ancient times, learning and teaching have been inseparably linked. The term 'learning' in traditional educational discourse has always implied 'teaching', which has led to the formation of a discourse orientation centered on 'learning' rather than 'teaching' in the field of traditional education. As education entered the field of scientific research, the construction of learning perspectives evolved with the changing understanding of education, and people's understanding of learning was continuously revised and improved.

In the later stage, due to the introduction of Western educational ideas and learning theories, the extension of "learning" in traditional Chinese educational discourse was narrowed, and the idea of "teaching" contained therein was differentiated, giving rise to concepts such as teaching and education. As a result, people's understanding of learning gradually diverged from their understanding of teaching.

### ***2.2 Learning depends on teaching and determines learning***

After modern times, influenced by Western traditional epistemology and perspectives on knowledge, the most common explanation for students' growth and development is the influenced by Western traditional epistemology and perspectives on knowledge.[3]

In the 1920s, the outbreak of the May Fourth Movement awakened the consciousness and aspirations of young intellectuals and the masses to pursue new ideas, new cultures, and new knowledge. It was during this period that a group of specialized scholars and research teams emerged in the field of education, translating and compiling a large number of educational works, thereby infusing new ideological vitality into the understanding of education and teaching. Subsequently, based on his own teaching experience, Mr. Tao Xingzhi criticized the prevalent classroom practices that prioritized "teaching" over "educating." He proposed using "teaching methods" instead of "teaching methods" and believed that teachers should "teach" students to explore, understand, and comprehend unknown learning activities, rather than unilaterally transmitting knowledge. This critique established the foundational perspective for understanding the relationship between "teaching" and "learning," namely, "learning follows teaching."

During the establishment of the People's Republic of China, in the context of drawing on the Soviet educational paradigm, the academic community adhered to a teacher centered teaching orientation, advocating that teachers should impart systematic knowledge and skills to students, and clarified the learning and understanding direction of "teaching" determines "learning". After the 1980s, the reform and opening up reinvigorated the exchange of educational ideas between China and the West. Domestic scholars actively and spontaneously introduced the theoretical achievements of Western psychology on learning research into China, sparking modern critiques and reflections on learning. Among them, Shi Liangfang believes that learning is "a relatively lasting change in the behavior, abilities, and psychological tendencies of learners caused by experience" [4]. This definition opened new horizons for the construction of learning perspectives in the field of education. However, classroom teaching reform adheres to the principle of 'teaching determines learning' and regards teachers' teaching as the center of classroom teaching. This emphasis often encroaches on the necessary time and space for students' learning to occur authentically. As a result, the disconnect between teaching and learning activities that genuinely promote students' development and realization has widened, deviating from the true essence of "teaching promotes learning."

### ***2.3 Teach by learning and teaching for the sake of learning***

In the 21st century, thinking on learning issues in education has shifted from borrowing from the West to critically reflecting on China's social background and educational realities. This shift focuses on the relationship between individuals and the social life world in learning, emphasizing the exploration of the subjectivity of learning. With the advancement of the new curriculum reform, "learning" has emerged as high-frequency term with both noun and verb attributes, replacing "teaching" as the core word in academic discourse research. As a result, the transformation of students' learning styles and methods has gained attention as a specialized topic among educational theorists and practitioners.

The understanding of the essence of learning has also evolved, with a representative interpretation of learning in teaching activities as activities within three categories: individual cognitive formation and development activities (cognitive processes), activities that promote social interaction in cognitive activities (social practice processes), and activities that constitute an individual's own internal relationships (introspection processes). Subsequently, the perspective on learning comprehension shifted from singular and one-sided to diverse and interconnected approaches.

The discussion of the value of learning transformed through metaphors of knowledge acquisition, participation, and knowledge creation[6], ultimately shifting towards individual knowledge acquisition and literacy enhancement. This shift indicates that teachers' understanding of teaching and learning is no longer confined to the basic pursuit of knowledge possession and acquisition but extends to enhancing the individual spiritual world. The focus has moved towards promoting students' learning and development as the central aim.

Consequently, the academic community generally agrees that "primary and secondary school classrooms are neither teacher-centered nor textbook-centered but learning-centered, serving students' learning and development." The "Compulsory Education Curriculum Plan (2022 Edition)" proposed strengthening subject practice and shaping new forms of learning through models such as "learning by doing, learning by using, and learning by creating." This directive points to a new direction for teaching transformation within the context of core competencies, addressing questions such as "what kind of learning determines teaching" and "why learning teaches." It can be seen that the understanding of teaching and learning has gradually shifted from focusing on "teaching" to focusing on "learning", with a greater emphasis on how to promote students' learning through teaching in a way that is both genuine and efficient. This approach highlights the regulatory role of learning in the teaching process. However, in specific teaching practices, this focus may overlook the guiding role of teachers' instruction in students' learning. Therefore, the understanding of learning must return to the two-way integration of teaching and learning, which is essential for deepening insights into teaching and learning.

## **3. Main characteristics of learning studies**

Based on the relationship between teaching and learning of learning, the nature of learning, its connotation, thinking, and logic, this study organizes and summarizes these aspects, providing a perspective through reflection. This approach can help rethink "why learn and teach," "what kind of learning to teach," and "what kind of learning is taught", promoting reflection on teaching practices and fostering improvements in teaching quality.[5]

### ***3.1 Ask and adhere to the essence of learning***

The questioning of the essence of learning is the logical starting point of learning research, and it represents an answer to the question, "What is learning?" It defines the way and content of school education regarding student learning, and also regulates teachers' teaching views and educational practices. Throughout history, scholars have constantly questioned what learning is. Their original intention is not just to define learning, but to judge and elaborate on its essence, pursuing a generative and transcendent understanding of learning, and clarifying the question "What kind of learning can be guided by teaching?"

In response to the call of the country to improve the quality of basic education and implement the fundamental task of cultivating moral character, people not only pay attention to the question of "what is learning", but also attach more importance to the value of "why is learning", and focus on critical reflection on learning from the perspective of its value. The different values and positions they adhere

to in learning lead to different understandings and positioning of learning, which can affect their construction of teaching perspectives and their thinking and behavior patterns regarding educational and teaching practice issues. This indicates that the essence of knowledge learning needs to be questioned, and attention should be paid to the close relationship between knowledge learning and individual growth and development. It is recognized that learning occupies a central position in the process of individuals becoming their true selves, and learning is seen as the unity of introverted spiritual exploration and extroverted unknown exploration.

Regarding the elucidation of the essence of learning, it should be viewed as an individual's psychological resilience and spiritual growth caused by constantly emerging contradictions and conflicts. It is a continuous manifestation of personality, which inspires teachers to guide students to discover and use their own strength, experience the pursuit of "truth", the confirmation of "goodness", and the realization of "beauty". In the teaching process, students, as individuals who "transform" through "learning", will autonomously connect the experience, culture, emotions, and other elements inherent in knowledge, interact with the real world in the tension of "maintenance and change", and seek self transcendence.

### ***3.2 Interpretation and deepening of learning connotation***

The teaching reform requires that the interpretation of the connotation of students learning should not only be based on the essence of learning, but also highlight the value appeal of education in the current era, while upholding an open attitude and being open to accepting advanced and diversified learning theories and practical wisdom. In order to adapt to the curriculum reform of basic education, establish a learning view that can support the teaching reform, the understanding of the learning connotation adheres to horizontal introduction across subject boundaries, multi-directional references facing an international perspective, and a learning transformation with a practical orientation.

The practical orientation of learning transformation refers not only to the learning phenomena in classroom teaching but also to ideas about students' learning in daily life practices. It involves the bottom-up extraction and transformation of situational wisdom and emphasizes full attention to the students' engagement in social life practices and cultural contexts. This process enriches the learning connotation and its extension, improving the situational explanation of learning.[7]

### ***3.3 Follow the logic of learning and understanding***

The optimization of curriculum implementation and the innovation of teaching organization in the field of basic education are all carried out on the basis of clarifying the relationship between knowledge, learning and teaching." The logic of education and the logic of teaching should be based on the logic of learning." The understanding of learning is never separate, it exists in the logical relationship between knowledge and teaching, and follows the order of the relationship with teaching and knowledge. Knowledge is the object of students learning. Teachers teaching should take the growth and development of students as the fundamental purpose of knowledge transformation, and introduce the value and significance of knowledge into students. "The logic of education and the logic of teaching should be based on the logic of learning."

## **4. Practical enlightenment of learning and research**

In order to further promote the teaching reform oriented toward core literacy, primary and secondary school teachers need to base on the classroom teaching practice of basic education, constantly reflect on the relationship between teaching and learning, update the learning concept, clarify what kind of learning to teach, and actively construct a learning view that can match the core literacy-oriented teaching to a certain extent.

### ***4.1 Based on the relationship between learning and student development, establish the coordinate of learning concept***

In strengthening the understanding of learning in the process of education and teaching reform, it is necessary to make clear the main factors that influence it. At present, the construction of the learning view is mainly based on policy orientation, theory orientation, practice orientation, and student position.

Policy orientation refers to that learning and understanding is to a large extent influenced by the spirit of relevant education and teaching reform policies issued by the state, following the guidance of official policy discourse. Theoretical orientation indicates that the cognition of learning is predominantly influenced by the trend of learning theory. Particularly, in western developed countries, the concept of learning change guidance plays a significant role. Practice orientation implies that schools, while adhering to national education policies and requirements, will integrate school-based and personalized educational concepts into education and teaching practices. This may, either intentionally or unintentionally, alter the direction of learning and understanding. Student position emphasizes that when one comprehends learning, one must truly value the relationship between knowledge acquisition and student development and pay heed to students' developmental potential and learning requirements. It is in the reflection of multiple learning understanding that it can position the coordinate of the learning concept supporting the teaching reform and shape the learning view that is compatible with the high-quality teaching reform.

#### ***4.2 Grasp the historical survival of learning and construct the consciousness of teaching history***

School education and teaching activities are all carried out under a specific historical background, and this historical dependence determines the historical understanding of teaching and learning. The existence of teaching is a historical existence. The development history of teaching is regarded as a historical process in which one teaching form replaces another teaching form. The past, present and future of teaching are interrelated. From this perspective, learning has a historical existence. It has experienced changes in the historical background, carried complex and rich meanings, and condensed people's cognitive concepts and value expectations for individual growth and adults in different historical periods. Tradition and modernity are two important dimensions of learning and research. The continuous collision and interaction between the two promote the deepening of learning concepts.

In order to increase the depth and breadth of learning understanding in the teaching reform, it is necessary to expand the horizon of teachers' understanding of learning, grasp the connotative changes of learning in the context of the past, present, and future, and form the historical awareness of learning and understanding. This requires teachers to realize that the learning concept, learning practice and experience will affect the current learning activities, and the current cognitive concept and practical experience of learning in the teaching process will inevitably affect the future teaching organization and development. The answer to the question of "why to teach" should be placed in the context of historical changes, combine the modern interpretation of learning with the traditional historical interpretation, and actively absorb the rich learning significance contained in the traditional learning theory, so as to enrich and further the construction of learning views in the modern sense.

#### ***4.3 Practical reflection rooted in teaching, seeking to go beyond learning concepts***

The deepening of teaching reform requires the continuous renewal of teaching concepts, providing directional guidance for school education and teaching reform, and guiding primary and secondary school teachers to construct learning views independently. Teachers' learning development and innovation not only depend on theoretical study and practical study, but also on the teachers' reflection in teaching practice and their imagination about teaching understanding, fully expressing their concern for students' real-life learning problems and the reality of students' growth and development, making advanced learning concepts serve in their own education and teaching practice exploration.

On the one hand, the mainstream learning concept in the academic circle can basically reflect the development level of learning theory and practical exploration in a specific period, and teachers learning understanding should seek the integration with the learning concept in the field of educational research. This requires teachers to actively carry out teaching reflection, improve the theoretical accomplishment of teaching, form profound learning concepts based on their existing knowledge structure, experience system and thinking mode, and establish the corresponding knowledge and teaching views.

On the other hand, the construction of learning concept strengthens the subject identity of teachers, can internally arouse teachers belief pursuit of teaching and education, lead teachers to reflect on their own education and teaching practice from the perspective of their own professional growth and students growth and development. This improves the teaching effect and expands the space for teachers to explore independently, constantly guiding them to grow into reflective and innovative educators.

## 5. Conclusions

Based on the changing relationship between "teaching" and "learning", we can examine the changes in the understanding of learning in the field of education and teaching, which can be summarized as: learning contains teaching, and learning and teaching are integrated; learning follows teaching, and teaching determines learning; there are three stages of teaching based on learning and teaching for the sake of learning. Through sorting and summarizing, it is found that learning research always follows the questioning and adherence to the essence of learning, focuses on interpreting and deepening the connotation of learning, adheres to the internal logic of learning cognition, and follows the order of the relationship between learning, teaching, and knowledge.

The practical enlightenment is that, in the current context of teaching reform guided by core competencies, primary and secondary school teachers should establish learning concept coordinates based on the relationship between learning and student development; grasp the historical existence of learning and construct an awareness of teaching history; reflection on grounded teaching practices, seeking to surpass learning concepts. Overall, examining learning research from the perspective of the relationship between teaching and learning, deepening the understanding and comprehension of the essence and value of learning, is closely linked to the transformation of knowledge and teaching perspectives in the field of basic education. It can promote the continuous development and innovation of teaching theories and also inspire practical exploration of teaching reform.

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