Concept Construction of Embodied Learning Based on "Life-Practice"

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ABSTRACT

Returning to the body is a key path for education to revert to its essence, responding to the era's value demands for human development. Current theoretical research on Embodied Learning focuses on the integrity of cognition, the body, and the environment, yet there is still a need to expand its theoretical perspective. This study adopts the literature research method, classroom observation method, and case study method to construct the concept of Embodied Learning based on "Life-Practice" Pedagogy. With a multi-disciplinary examination of the body as its theoretical foundation, the study clarifies the internal relationship between "Life-Practice" Pedagogy and Embodied Learning, and extracts the essential characteristics of Embodied Learning: taking the body of a concrete individual as the subject, taking the overall organic interaction between the body and the environment as the approach, taking the body's perceptual practice as the driving force, taking neural mechanisms and perceptual experience as the core, and aiming at the development of human life. Finally, it proposes practical paths for classroom Embodied Learning from the practical perspective, providing new ideas for the theory and practice of Embodied Learning.

Keywords: body. Embodied Learning, concrete individual, individual life practice, "Life-Practice" Pedagogy

INTRODUCTION

In the reform of basic education in recent years, the value of the "body" for individual development has become increasingly prominent. In 2010, China emphasized promoting the active development of students in the National Medium- and Long-Term Plan for Education Reform and Development; in 2021, China introduced the "Double Reduction" policy to alleviate students' physical burdens; and in 2022, China advocated subject-based practice in the Compulsory Education Curriculum Plan. All these policies point to the connection between the body and learning. Marx holds that perceptual practice is the foundation of the existing world, and perceptual activities contain life experiences, which promote education to return to the authenticity of the body.

Embodied cognition is a frontier in academic research. The Western concept of "embodied learning" advocates that the body is the subject of learning, and that mental development is promoted through the interaction between the body and the context. However, a small number of scholars approach this from the perspective of individual life practice, overlooking the process by which students achieve spiritual growth through bodily practice. Ye Lan's "Life-Practice" pedagogy points out that life and practice are the foundations of human existence, the body is the material basis of life, and education needs to regain care for the body of specific individuals. Based on this, this study attempts to address four questions: the historical perspective and theoretical foundation of the concept of embodied learning, the relationship between individual life practice and embodied learning, the basic connotation of embodied learning, and reflections on educational forms and embodied paths in the classroom.

Scholars' understanding of the connotation of the body goes beyond the physiological level, covering the dimensions of practice, life, and specific individuals. Maurice Merleau-Ponty proposed "I am my body"; Chinese scholars believe that the body is an integrated life whole of body and mind, with the characteristics of subjectivity, experientiality, and interactivity.

Research on the connotation of embodied learning focuses on three aspects. Those are body-based learning emphasizes the fundamental role of the body in cognition; situation-based learning holds that learning occurs in specific contexts and develops through interactive coexistence with the environment; experience-based learning considers learning as the transformation and growth of bodily experience.

Research related to embodiment involves educational implications, concepts, classroom teaching, and learning design. However, there are few attempts to define embodied learning from the perspective of "Life-Practice" pedagogy, and there is a lack of attention to the life practice of specific individuals.

The literature review shows that practical exploration of embodied learning is rich, but its theoretical perspectives need to be expanded. Interpreting embodied learning from the perspective of individual life practice can enrich its theoretical and practical exploration.

Based on the educational stance of individual life practice, embodied learning refers to a learning process in which a living individual, embedded in a specific context, takes the body of a specific person as the subject, takes organic interaction with the environment as a whole as the basic approach, takes bodily perceptual practical activities as the dynamic foundation, and takes bodily movement, physiological activities, and sensory stimulation as the core content to acquire experiential experiences and ways of thinking. It presents a state of active generation by individuals and represents the optimal manifestation of individual life practice. Its fundamental goal is to promote the development of spiritual life, including cognition, emotion, and thinking.

This study constructs the concept of embodied learning from the perspective of "Life-Practice" pedagogy and follows the framework of "problem formulation - problem analysis - problem solving".

The introduction puts forward the research problem, namely the construction of the concept of embodied learning based on "Life-Practice", from the perspectives of policy background, academic frontier, and literature review. Chapter 2 sorts out the educational history of embodied learning and examines the manifestations of the body in philosophical, psychological, and pedagogical contexts, providing a historical perspective and theoretical foundation for the construction of the concept. Chapter 3 clarifies the internal relationship between "Life-Practice" and embodied learning, interprets the core of "Life-Practice" pedagogy, and defines the connection between life practice, specific individuals, and embodied learning. Chapter 4 refines the basic connotation of embodied learning from both theoretical and practical perspectives, and abstracts its essential attributes by combining the views of representative scholars and classroom cases. Chapter 5 deepens the concept from the practical perspective, examines the manifestations of the body in teaching practice, and realizes the two-way construction of theory and practice.

THEORETICAL FRAMEWORK

1. The Loss of Life: The Decline of Bodily Education

Rationalism and empiricism attribute the perceiving subject to the internal mind, neglecting the role of bodily perception in cognition. This has led to a long-standing disembodied culture in China's school education. "Disembodied" learning regards students as "abstract persons," ignoring knowledge experiences and life experiences, while prioritizing knowledge over human development. The body is marginalized in the educational field, leaving students in a state of passive existence.

In the philosophical context, both rationalism and empiricism belittle the body. Pythagoras viewed the body as the "tomb of the soul"; Socrates worried that sensory knowledge would hinder reason; Plato’s "doctrine of the soul" advocated freeing oneself from the body to attain reason; Descartes’ "Cogito, ergo sum" established mind-body dualism, asserting that cognition can be separated from the body. Rationalism emphasizes the universality of knowledge and negates sensory experience, while empiricism, though valuing experience, treats the body as a "container." Both schools ignore the body’s role in shaping cognition.

In the psychological context, behaviorism defines learning as "behavioral change," confusing human behavior with animal behavior and attributing it to external stimuli, thus "reifying" the body. Influenced by mind-body dualism, cognitivism regards learning as the brain’s information processing, treating the body as a mere "carrier" and claiming that cognition has nothing to do with physical structure. Both schools exclude the body from the mind.

In the educational context, disembodied education treats the body as a carrier, maintaining the separation between mind and body. Teaching is oriented towards cultivating the mind, ignoring the cognitive and developmental value of the body—ultimately leading to the decline of the body in education.

2. The Recovery of Life: The Return of Bodily Education

The bodily turn in modern Western philosophy and cognitive science has prompted basic education to emphasize the bodily characteristics of learning. As the fundamental way of existential life and the subject of learning, the body is returning to the essence of education.

In the philosophical context, Nietzsche advocated "taking the body as the criterion," arguing that the body is a symbol of the will to power; Husserl emphasized that physical structure influences cognition; Heidegger's "being-in-the-world" pointed out that humans understand the world through bodily interaction; Merleau-Ponty constructed bodily phenomenology, asserting that the body is the perceiving subject and that humans understand the world through the body.

In the psychological context, Dewey criticized the traditional view of knowledge, arguing that bodily experience is the foundation of cognition; James' peripheral theory of emotion pointed out the unity of the body and emotion; Piaget believed that cognition originates from physical actions and sensory experiences; Vygotsky proposed that higher mental functions stem from the internalization of physical activities; Galperin studied the process of internalizing external activities into thinking. All these theories emphasize the role of the body and environment in cognition.

In the educational context, "fostering virtue through education" must be based on the vibrant body. Embodied cognition and bodily pedagogy have become frontier concepts, advocating a shift from "knowledge-based pedagogy" to "bodily pedagogy." This approach treats the body as the subject of learning and integrates it into classrooms. Embodied learning, centered on the experiences of interaction between the body and the environment, breaks through the separation between the body and knowledge and promotes education to return to its essence.

METHOD

Research Foundation

1. Theoretical Foundation

Through course learning and book reading, two ideas for concept formation are refined. One is to start from practice, analyze examples and activity types, and summarize the essential characteristics; the other is to start from theory, combine the theoretical context and representative viewpoints, and conduct cluster analysis. At the same time, with core keywords such as "embodiment", "phenomenology of the body" and "neuroeducation", literature and books are collected to conduct in-depth thematic research on embodied learning, laying the theoretical foundation for the thesis.

2. Practical Foundation

After theoretical learning, the author participated in the "lesson observation and evaluation" activities of five experimental schools through a combination of online and offline methods, recorded the activities and collected cases. This not only provided ideas for the research, but also accumulated argumentation materials for the thesis writing.

Research Methods

1. Literature Research Method

   This method is used to clarify the reform trend and practical needs of basic education. Literature is collected around core keywords to sort out the basic ideas, representative viewpoints and development context of embodied learning, summarize the trends and clarify the research starting point.

2. Classroom Observation Method

   The author went to the practical sites of five primary schools and carried out the work in three stages. In the early stage, the author was familiar with teaching materials, curriculum standards and teaching designs; in the middle stage, the author made detailed records of lesson observation and evaluation as well as audio and video records; in the late stage, the author organized and analyzed materials in combination with audio and video to serve the thesis writing.

3. Case Study Method

   Materials such as classroom videos and learning record sheets are classified and compared by subject and dimension, and typical cases are selected for argumentation.

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FINDINGS AND DISCUSSION

1. Subsection one A Historical Investigation of Embodied Learning in Education

Since the era of traditional Western philosophy, the body has often been excluded from education in discussions on the mind-body relationship: rationalism and empiricism either regard the body as an obstacle to reason or merely treat it as a tool; cognitive psychology attributes cognition to the abstract processing of the brain, giving rise to a culture of disembodied education. With the "body turn" promoted by modern philosophy (represented by Husserl, Heidegger, etc.) and psychology (represented by Dewey, Vygotsky, etc.), the rise of embodied cognition has shifted the body's value from instrumental to vital, enabling it to transition from decline to return in education and laying a theoretical and historical foundation for embodied learning.

a. Loss of Life: The Decline of the Body in Education

Intellectualism and empiricism attribute the perceptual subject to the internal mind, ignoring the role of physical perception in cognition. This has led to a long-standing culture of disembodiment in China's school education — students are viewed as "abstract beings" or "objective beings", with their knowledge experiences and life experiences neglected, and knowledge placed above personal development. Consequently, the body is marginalized, and students exist in a passive state.

In the philosophical context, both rationalism and empiricism belittle the body: Pythagoras saw the body as a "tomb" for the soul; Socrates worried that sensory knowledge would hinder reason; Plato's "theory of the soul" advocated freeing oneself from the body to attain reason; Descartes' "I think, therefore I am" established mind-body dualism, denying the body's role in cognition. Although Locke, a representative of empiricism, emphasized that "knowledge originates from sensory experience", he regarded the body as a "container" for carrying knowledge. Both schools ignored the body's value in shaping cognition.

In the psychological context, behaviorism views learning as "behavioral change", equating human behavior with that of animals and attributing it to external stimuli, thus "objectifying" the body; influenced by mind-body dualism, cognitivism regards learning as the brain's information processing, believing that cognition has nothing to do with physical structure and only treating the body as a "carrier". Both schools exclude the body from the mind.

In the educational context, disembodied education separates the mind from the body, with the core orientation of cultivating the mind while ignoring the body's value in cognition and development. Teaching objectives are predetermined, procedures are mechanized, and learning is equated with pure rational thinking, ultimately leading to the decline of the body in education.

b. Recovery of Life: The Return of the Body in Education

The "body turn" in modern Western philosophy and cognitive science has driven basic education to attach importance to the physical characteristics of learning. As the fundamental form of existence of life and the subject of learning, the body has returned to the essence of education.

In the philosophical context, Nietzsche's proposition of "taking the body as the criterion" holds that the body is a symbol of the will to power; Husserl emphasizes that physical structure influences cognition; Heidegger's concept of "being-in-the-world" points out that humans understand the world through physical interaction; Merleau-Ponty constructed the phenomenology of the body, arguing that the body is the perceptual subject and humans comprehend the world through their bodies.

In the psychological context, Dewey criticized the traditional view of knowledge and advocated that physical experience is the foundation of cognition; James' peripheral theory of emotion points out the unity of the body and emotion; Piaget believed that cognition originates from physical actions and sensory experiences; Vygotsky proposed that higher mental functions originate from the internalization of physical activities; Galperin studied the process of internalizing external activities into thinking. All these theories emphasize the role of the body and the environment in cognition, promoting the unity of the mind, body, and environment.

In the educational context, "fostering virtue through education" must be based on the vivid

body. Embodied cognition and physical pedagogy have become cutting-edge fields: they advocate a shift from "knowledge-based pedagogy" to "body-based pedagogy", regarding the body as the subject of learning and integrating it into the classroom. Embodied learning holds that learning is rooted in the interaction between the body and the environment, demonstrating generative and physical characteristics. It breaks the separation between the body and knowledge and promotes education to return to its essence.

2. Subheading two Clarification: The Relationship Between "Life-Practice" and Embodied Learning

The "Life-Practice" pedagogy founded by Ye Lan is a pedagogy with Chinese stance and discourse, whose fundamental goal is to nurture human life and promote life development. Human life relies on the physical existence of specific individuals — without the body, there would be no life development or practice. The body is the basic form of existence for an individual's life practice, and embodied learning is precisely the care for life and educational concern. Therefore, it is necessary to clarify the inherent correlation between the two from the perspective of pedagogy.

a. Interpretation of the "Gene-Like" Concept of "Life-Practice"

The "Life-Practice" pedagogy school takes "genes" as the foundation for the establishment of pedagogy, because "genes" are the internal basis for the continuation and development of life, with inherent complexity, intergenerational inheritance, and life generativity. Ye Lan uses "genes" as a metaphor for the core of pedagogical theory, pointing out that pedagogical theory should have characteristics such as intergenerational function and generative mechanism. She clearly identifies "Life-Practice" as its gene-like core concept, and points out that there is an inherent connection between the body of a specific individual and life practice. She also explains "life", "practice", and their relationship based on interdisciplinary thinking.

"Life" refers to the unique phenomenon of organisms composed of macromolecular nucleic acid proteins, which can realize material construction, reproduction, adaptation to the environment, etc. The body of a specific individual is the material basis for the existence and continuation of life. Ye Lan explains human "life" from the perspectives of natural mechanisms, general characteristics, and species-specific characteristics. She points out that living organisms have mechanisms such as metabolism and active adaptation to the environment; individual life growth has both certainty and uncertainty, as well as characteristics such as leap and continuity. Based on Marx's perspective of "species-life", she emphasizes that humans surpass animals through their physical structure (such as bipedal walking) and labor practice, and form species-specific characteristics through conscious life activities involving the cooperation of hands and brains.

"Practice" refers to human activities with consciousness, objects, and purposes, which is similar to "life" and not limited to moral practice or productive labor. Human life and practice have been inherently connected and mutually constructive since their origin, jointly forming a complete individual life practice. Practice is a unique life activity of humans, which enriches the forms of life.

The inherent relationship of "Life-Practice" is reflected in three dimensions: natural, social, and spiritual. At the natural dimension, life and practice have been inseparable since the formation of humans. Labor is the fundamental difference between humans and animals; practice is the form of existence of life and inherent in the needs of life. At the social dimension, humans create society through life practice, and individuals achieve social development through practice; "Life-Practice" has both concrete historical and contemporary characteristics. At the spiritual dimension, practice is directly related to the human spiritual world; humans develop brain functions and form self-awareness through practice, embodying the free and conscious species-specific characteristics.

In addition, the "Life-Practice" pedagogy calls for "concrete individuals". For a long time, school education has "abstracted" and "standardized" people. Paul Lengrand pointed out that the object of education is "concrete people". Ye Lan takes "concrete individuals" as the fulcrum of pedagogical theory, emphasizing that life grows in concrete individuals. Education needs to pay attention to individual differences and potentials and promote the holistic development of life.

b. The Inherent Relationship Between "Life-Practice" and Embodied Learning

Human life is based on the body of a specific individual — without the body, there would be no life or practice. Embodied learning advocates "I am the body", and its essence is the process and optimal manifestation of an individual's life practice. The "Life-Practice" pedagogy emphasizes the

active development of concrete individuals and cares for vivid life entities, while embodied learning is precisely the way in which individuals engage with the environment with their entire lives. The body integrates natural, social, and spiritual life; physical activities are the basic form of existence of life; the differences in physical experience highlight the uniqueness of life; physical emotions can awaken life wisdom.

Embodied learning presents a holistic existential way of life in which the body is involved. On the one hand, it is a receptive form of existence: individual development needs to be achieved through interaction with the environment and practical activities. In embodied learning, students personally experience the process of knowledge formation through physical activities in a specific environmental atmosphere, accompanied by various psychological feelings, which are realized in the interaction of multiple subjects. On the other hand, it is a materialized form of existence: individual development needs to rely on life practice activities. Embodied learning includes materialized physical activities such as outlining and operating. Through these activities, individuals interact with knowledge, form internal thinking and emotions, and realize the transformation from potential development to actual development.

The body is the unity of natural, social, and spiritual life: the body of natural life is the carrier of spiritual and social life; the body of social life gains experience through activities, which becomes the nutrient for spiritual life. Education needs to pay attention to the holistic development of the body and cultivate a complete life. Physical activity is the basic form of existence of an individual's life. It goes beyond the scope of the physical body, has multiple attributes, and is a process for humans to transform themselves, achieve development, and awaken self-awareness.

The differences in physical experience highlight the uniqueness of individual life. The individual's sensorimotor system affects the formation of cognition, and different sensorimotor modes bring different physical experiences, shaping unique cognitive styles. Education needs to pay attention to concrete lives based on physical experience. Physical emotions can awaken life wisdom. In real education, most attention is focused on the cognitive level, but wisdom also includes emotions and will. Physical emotions can regulate cognition, promote individual development, and guide students to awaken life wisdom through emotional experience.

3. Subheading three The Basic Connotation of Embodied Learning in Individual Life Practice

Embodied learning is a learning process in which life individuals embedded in specific contexts, with the bodies of concrete individuals as the subject, obtain experiential experiences and ways of thinking through the overall organic interaction with the environment, relying on the body's perceptual practical activities, and focusing on physical movement, physiological activities, and sensory stimulation. It presents an actively generative state, is the optimal manifestation of an individual's life practice, and its fundamental goal is directed at the development of spiritual life such as cognition, emotion, and thinking.

a. Understanding of "Body" and "Embodiment" in Embodied Learning

The "body" in embodied learning refers to the body of a concrete individual. Human life is the unity of nature, society, and spirit. Education needs to care for vivid physical life entities and pay attention to the overall state of the body of a concrete individual. The body of a concrete individual is in a specific environmental relationship. Through practical activities carried out by the body, it gains perceptual experiences and cognition, which are transformed into the driving force of life, accompanied by inter-subjective interaction and emotional surges, presenting a complete state of life existence.

The "embodiment" in embodied learning refers to the active life practice of an individual, which is the active generation in the sense of life. It is embodied in the dynamic interaction of the body of a concrete individual in the environment and the improvement of self-awareness, which has a potential and far-reaching impact on individual development. In the context of school education, "embodiment" is manifested in students' active participation in teaching activities, such as demonstrating thinking based on learning record sheets and participating in interactions between teachers and peers. In contrast, in "substituted learning" — where teachers directly present answers and learning lacks the support of activities — the state of "no embodiment" occurs, leading to students' passive existence.

b. Embodied Learning Takes the Body of a Concrete Individual as the Subject

The body of a concrete individual is the fundamental component of embodied learning. The subject's consciousness, intelligence, etc., are all realized based on biological foundations. Learners' understanding of abstract concepts needs to rely on embodied experiences formed through physical activities, which are completed through metaphorical links between the source domain and the target domain. The repetition of physical experiences constitutes the basic logic for understanding the world.

As Merleau-Ponty put it, humans understand the world through their bodies — "I am the body" rather than "I have a body". The body is the subjective existence of learning. Through embodied practice, individuals gain experiences, awaken their sense of subjective consciousness, and present a "personalized" body to realize the value of life.

At the same time, the body represents the complete life state of a concrete individual in the process of embodied learning. Students engage in the learning field in an "immersed" way, stimulate the vitality of life through perceptual practice, and build an "I-Thou" relationship in interaction with the environment and others. The presence of the body means the presence of life. Education needs to provide space for students' physical development, allowing them to participate in classroom activities and expressions, enhance the vitality of life, and achieve authentic development.

c. Embodied Learning Takes the Overall Organic Interaction Between the Body and the Environment as the Basic Approach

Embodied learning requires the body of a concrete individual to engage in the classroom environment in a holistic manner. Individual development is affected by the existing level; the body has historical, cultural, and social attributes and is a node of meaning. The results of its development constitute acquired factors, which affect the way individuals act on the external environment.

Classroom teaching should regard students' differences as resources, pay attention to their life experiences and learning obstacles, and help individuals develop on the basis of their original foundations. At the same time, the body realizes two-way interaction with the environment in a holistic way. Individuals and the world have an "internal coupling relationship of mutual causation and mutual shaping". The body participates in the environment through actions, absorbs materials and information, and transforms them into its own needs, forming a symbiotic relationship among cognition, the body, and the environment — the environment is transformed into physical experience, and the body also becomes part of the environment, affecting others and the external world.

In addition, the body constructs "relationships" in interaction. Dewey emphasized that experience originates from personal activities. Embodied learning connects humans with the environment through activities. In classroom communication and cooperation, relationships such as mind-body and self-others are attached to the body, demonstrating the multi-dimensional unity of the body.

d. Embodied Learning Takes the Body's Perceptual Practical Activities as the Dynamic Foundation

Physical activity is the basic form of existence of an individual's life. Marx pointed out that labor is the essential difference between humans and animals. Humans carry out purposeful life activities through bipedal walking, cooperation between hands and brains, etc. Practice is inherent in the needs of life, and practice cannot be separated from the body of a concrete individual. Therefore, physical activity is a unique practical behavior of individuals.

At the same time, physical activity is the basic form of an individual's life practice. "Life practice" refers to the purposeful activities experienced by life individuals, which are the fundamental conditions for the authentic interaction between individuals and the environment. Through physical activities, individuals realize the development from potential to actuality and awaken their sense of subject consciousness.

In addition, the external activities of the body are the source of internal activities. Piaget believed that cognition originates from the interaction between the subject and the object, and there is an inherent connection between external activities (physical actions) and internal activities (mental activities). Galperin proposed that external activities are the foundation of internal activities. In embodied learning, learners carry out materialized activities through physical embodiment (operating real objects), situational embodiment (reproducing situations with

instruments), and offline embodiment (relying on language or imagination). They internalize external actions into cognition and emotions, realizing the transformation from potential development to actual development.

e. Embodied Learning Takes Neural Mechanisms, Sensorimotor Functions, and Experience as the Core Content

The body structure and the brain's nervous system are the internal mechanisms of embodied learning. The human body's organs and brain structure provide the material basis for the existence of life. The body has plasticity and potential; the brain's neurons and functional circuits are the basis of mental processes. Learning is the process of establishing connections between neurons, which needs to rely on existing physical experiences.

Embodied learning pays attention to students' existing development levels and helps them understand knowledge through teaching scaffolding. At the same time, long-term physical participation can change the brain structure, thereby affecting cognition. In the classroom, hands-on operations and writing are processes of mental thinking.

The body's sensorimotor system plays a fundamental role in embodied learning. Merleau-Ponty emphasized that humans perceive the world through the body; Marx advocated the perceptual existence of the subject. Sensorimotor ability is the foundation of cognitive formation. Cognition needs to rely on the interaction between the body and the environment, as well as physical activities. Through mobilizing multiple senses, embodied learning allows students to experience the process of knowledge formation and develop higher-level thinking.

In addition, concrete individuals gain life experiences in specific contexts. The body, emotions, and cognition exist as a whole. Embodied experience is divided into the verb level (experiences obtained through action and operation) and the noun level (formed experiences). Its repetition constitutes a unique way of thinking and becomes a resource for life growth.

f. Embodied Learning Takes the Realization of Human Life Development as Its Fundamental Purpose

The essence of education is to nurture people, and promoting human development is its ultimate goal. The nature of education is to awaken students' awareness of self-development and their ability of self-education, and the body is the basic prerequisite for all education.

From the perspective of pedagogy, the body is a life whole with feelings, emotions, and thoughts, providing infinite possibilities for life development. Education needs to return to the real body to realize the value of nurturing people.

Embodied learning embodies the "directness" of educational practice. The presence of the educated person's body is the core. Educators need to design specific environments and activities: on the one hand, relying on the body's perceptual activities to achieve direct feelings; on the other hand, realizing direct inter-subjective communication through "human-human" dynamic interaction, returning to classroom communication with the body present.

Embodied learning not only pays attention to students' current life state but also focuses on their future life development. Its ultimate purpose is to realize the value of life, improve the quality and happiness of life. It is a life-care education that returns to the body, is based on the body, goes through the body, and is for the body. With the body as the "carrier", life as the "soul", and practice as the "action", it is a physical practice that enriches life.

4. Exploration: Thoughts and Practical Paths for Realizing Embodied Learning in the Classroom

Based on the pedagogical perspective of individual life practice, the development of human life is the foundation of education. The essence of education is to improve the value and quality of human life, thereby enhancing the quality of individual life. In other words, realizing the development of human life requires returning to the body, which is an inherent requirement of education.

However, influenced by traditional Western philosophy and cognitive psychology, China's education has long presented the characteristics of a "disembodied" culture. It is necessary to examine the current state of the classroom using the theory of embodied learning as a framework, provide ideas and paths for the embodied transformation of the classroom, regain the essence of education, and facilitate the life growth of students.

1. Current Situation Examination: Classroom Learning Is Detached from the Body

Human development is the most inherent and fundamental purpose of education. Education aims to enable every student to become a "complete" life individual with free and comprehensive physical and mental development. This requires education to shift from instrumental value to inherent value, focusing on the life practice and development of concrete individuals.

However, driven by technical rationality, there is a gap between the ideal and reality of educational value: students' development is simplified to standardized numerical evaluation, their rich personalities are abstracted into cold data, and the complexity and richness of educational practice are eliminated.

The overemphasis on instrumental value has led to the concealment of the body in the educational field. Classroom learning is detached from the body, and educational practice lacks the physical dimension and life care, leaving people in an "incomplete" state of development and generating negative life experiences.

From the perspective of learning concepts, traditional epistemology regards students as "knowledge-based beings" rather than "physical beings". Knowledge is regarded as an abstract representation of the objective world by the subject, separated from the individual's life practice, and students are reduced to "abstract beings", "substantial beings", or "objective beings".

As Paul Lengrand put it, "modern humans are victims of abstraction; various factors can harm people and destroy their unity". In practice, this concept is manifested as the "disembodied" process of "substituted learning": on the one hand, there is "teacher substitution" — teachers replace students' learning experiences with their own life activities, break down problems through "small steps", guide responses with questions like "is it right?" or "correct?", and even directly provide answers. Students mechanically memorize symbolic knowledge through "sitting and listening quietly", lacking the process of knowledge internalization involving physical participation, perception, and experience.

On the other hand, there is "peer substitution" — teachers ignore the individual differences of students, standardize them with unified standards, rely on top students for classroom answers, and divide labor in cooperative learning leads to the separation of experience. Students' complete physical experience is replaced, and they are reduced to abstract learning individuals.

In terms of learning content, knowledge is regarded as an absolute existence. Teachers impart predetermined knowledge, and students master fragmented knowledge through the model of "listening — memorizing — repeated training". Their unique pre-class physical experiences, life experiences, and in-class physical practices and insights are not incorporated into the form of teaching knowledge.

Dewey's theory of "learning by doing" emphasizes that learning is a process of experience transformation through the interaction between individuals and the environment. However, in reality, learning content is separated from physical experience, knowledge is external to students, and the process lacks physical practice and emotional involvement, leading students to fall into knowledge dilemmas, lose their enthusiasm for learning, and learning is alienated into a one-way input and output of abstract symbols.

Ye Lan pointed out that "education that only focuses on the value of transmitting existing knowledge actually nurtures people who take passive acceptance, adaptation, obedience, and execution of others' thoughts and wills as their basic way of existence" — this is a true portrayal of the current situation.

The learning process presents the characteristic of "training the mind with the mind" which suppresses the body. Traditional cognitive concepts regard cognition as an abstract internal process of the brain. Under the evaluation framework of "only focusing on scores", teachers are reduced to "knowledge porters" and students become "containers".

In this process, the body is disciplined: the value stance of "promoting the mind and suppressing the body" restricts students' bodies to the limited space of their desks. Teachers require "sitting and listening quietly" through rigid control, leaving limited time and space for students' physical practice and thinking. It is difficult to generate student resources in the classroom, and even if there is occasional generation, it is ignored. The body is reduced to an "object that is concealed and disciplined".

At the same time, physical participation is formalized: the "independent, cooperative, and inquiry-based learning" advocated by the basic education curriculum reform is reduced to false inquiry. Inquiry tasks are reported in a hurry or carried out according to the procedures preset by teachers. The "movement" of the body only stays on the surface, failing to realize the "movement" of thinking, and students still exist in a passive state.

The teacher-student relationship manifests as a static "I-It" relationship. From the perspective of life practice, teacher-student communication should be a dynamic interaction of intercorporeality, realizing life interaction and direct communication through body language, facial expressions, etc.

However, in reality, teachers are the dominant players in the classroom, determining the content and methods of learning and possessing absolute authority. Students are in a dominated position, and the classroom becomes a "stage for teachers' solo performances". Teachers overly control the time and space of the classroom, lecturing on abstract symbols unrelated to individual life, and depriving students of the opportunity to actively observe, explore, and experience. Even in the name of "for students' development", it actually eliminates the subjectivity of students' spiritual life development.

Ye Lan emphasized that "classroom teaching should be regarded as an important life experience in the lives of teachers and students". However, under the static "I-It" relationship, it is difficult for both teachers and students to obtain positive life experiences and realize the value of life.

There is a problem of "separated" creation in the learning situation. Knowledge is the product of experience from the interaction between the body and the situation. Students need to enter "being-in-the-world" with their entire lives and realize the connection between the situation, experience, and thinking through embodied practice.

However, in reality, teachers' understanding of situations lacks theoretical depth, and there are three major problems in situation creation: first, the stacking of situations — situations are presented in a hurry for the sake of "labeling", and students lack real-time interaction between the body and the situation, with the body of concrete individuals still ignored; second, the lack of essential connections between situations, failing to realize the penetration of elements and making it difficult to target students' overall experience; third, the disconnection between situations and real life, ignoring the holistic interaction between students and the environment. Essentially, situations are external to students, and even if situations are constructed, students cannot obtain a complete physical experience.

2. Path of Return: The Embodied Transformation of Classroom Learning

The above classroom phenomena are essentially manifestations of "disembodied" education — students learn knowledge in an abstract way, lacking disciplinary practice and physical participation, and ignoring the life development of concrete individuals. Therefore, it is necessary to promote the return of the body to the educational field, pay attention to the individual's way of existence and life state, attach importance to the value of the body's presence in meaning construction, realize the embodied transformation of classroom learning, regain the essence of education, and facilitate the life growth of students.

The concept of embodied learning should be based on the student development stance of "concrete individuals", no longer regarding students as "cognitive individuals" but as "life individuals" with potential. It supports students' development through specific situations and activities, enabling them to gain life experiences in embodied actions, awaken their sense of subjectivity, and realize the transformation from potential possibility to actual development.

This concept needs to focus on three aspects: first, the initiative of students' development. As a living organism, the body can actively exchange materials and spiritual information with the environment. Education needs to recognize and stimulate this initiative, avoiding teachers replacing students' "personal experience", otherwise, it will suppress students' initiative and awareness of self-development.

Second, the potential of students' development. Students are "undeveloped fertile soil", and the body contains huge potential. Education needs to take students' existing development level as the starting point, release their desire and potential for learning through embodied participation and practice, and guide students to pursue certain development in uncertainty.

Third, the differences in students' development. Each student has unique environments, knowledge preparation, and emotional expectations. Teachers need to regard differences as teaching resources, grasp students' experiences and development status before class, observe their physical performance (such as operations and expressions) in class, accurately identify difficulties and needs, and analyze differences through discussions to make the classroom full of life vitality.

The content of embodied learning should take "experience" as the entry point to realize the internal connection between knowledge, real life, and individual life practice. Book knowledge is the abstraction of human life experience. "Disembodied" classrooms separate students' personal experiences and ignore the experience process of knowledge formation. In contrast, in embodied learning, "the repeated patterns of the body acting on the world constitute the way of cognition", and physical experience is the basic logic of cognition.

Teachers need to take students' perceptual experience as the starting point of learning, activate their physical "pre-history", help establish connections between new and old knowledge, and realize the return of knowledge to its life form.

Taking the teaching of "Understanding Numbers Within 1000" in primary school mathematics as an example, teachers guide students to collect data of 3-digit to 4-digit numbers in life before class (such as house number 560, car mileage 20050 kilometers). In class, these data are used as resources to help students establish a perceptual understanding of the number concept of "thousands".

At the same time, based on the learning methods of numbers within 100 that students have already mastered, teachers guide them to transfer these methods to the reading, writing, and composition of numbers within 1000, allowing concepts to "grow" from the existing knowledge structure rather than being passively accepted, thus realizing the connection between knowledge, life, and experience.

The process of embodied learning should take activities and learning record sheets as carriers, allowing students to experience the process of knowledge formation. The accumulation of knowledge is not the fundamental goal of development; the key is that students use knowledge for cognitive processing and thinking generation.

On the one hand, knowledge experience is carried out with physical activities as the core. Through the sensorimotor system (such as vision, hearing, and touch), students gain life experiences and realize the integration of external actions and internal thinking.

For example, in the teaching of the primary school Chinese text "Round Lotus Leaves", students play roles such as small water droplets and small dragonflies in groups. They imagine based on the text and show the state of the roles through physical movements, language, and expressions. Teachers guide students to observe and evaluate their peers' performances, and supplement the range of movements and emotional expressions. In the role-playing, students realize the dialogue with the text and life. Physical activities involve thinking participation, which is directed at the development of thinking and wisdom.

On the other hand, learning record sheets are used as carriers to realize the visualization of knowledge. Through activities such as operation, circling, and calculation, students leave traces of thinking and externalize the thinking process.

Taking the teaching of "Patterns in Periodic Phenomena" in primary school mathematics as an example, students complete "circling" and "drawing" on the record sheet to judge the arrangement pattern of graphics, and then deduce the 32nd graphic and the total number of graphics through "calculation" (such as 32 ÷ 3 = 10 groups... 2 pieces). The record sheet not only presents physical operations but also allows students to experience the process of exploring patterns, with knowledge containing real emotions and life insights.

The teacher-student interaction relationship needs to construct a dynamic "I-Thou" relationship. Both teachers and students are life individuals integrating body and mind. The discovery of mirror neurons shows that physical simulation and real-time feeling are the basis for inter-subjective understanding.

Teachers need to "listen" to students with their body posture: convey attention through focused eyes and kind words, respect students' right to speak, understand the thinking mode behind their words, classify and summarize students' states, capture valuable typical resources, and avoid ignoring students because their answers "deviate from the preset".

At the same time, teachers guide students to learn to listen, evaluate and reflect on the basis of respecting their peers' views, so as to realize interactive generation among students.

For example, in the teaching of the primary school Chinese text "Scenario Songs", teachers guide students to describe the seaside scenery using the method of "measure word + thing". There are differences in students' expressions (such as incompleteness or rich imagination). Instead of making hierarchical evaluations, teachers guide students to discover the highlights of their peers (such as "describing in order and using the correct measure words") and put forward suggestions (such as "adding more things to enrich the scene"). Then, the classroom is turned over to desk-mate communication, forming an ecological cycle of teacher-student and student-student interaction, sparking the sparks of life.

The situation of embodied learning needs to create an environment for organic interaction. The environment of embodied learning is open and generative. Students need to interact with the environment through embodied actions, stimulate sensory experiences and emotions, and awaken self-awareness.

Teachers need to liberate students' bodies, provide them with time and space for participation, as well as opportunities for operation and perception, and build learning based on real situations, problems, and tasks.

For example, in the teaching of "Changes Producing Gases" in primary school science, students work in groups of four to complete experiments through "moving, touching, smelling, and weighing": first, they guess the mixing changes of water, white vinegar with salt, sugar, and baking soda; then, they design experiments to verify (controlling the dosage to reduce errors); next, they collect gases (observing the expansion phenomenon with sealed bags); finally, they explore the properties of gases (such as observing the extinguishing of a lit wooden stick when put into the gas). In the experimental situation involving multiple senses, students personally experience the process of chemical changes, internalize external perceptual activities into growth resources, liberate their bodies, and awaken their awareness of active development.

I can further polish the English translation to make the academic expression more accurate and fluent, such as optimizing the collocation of professional terms and adjusting the logical connection of long sentences. Do you need me to provide this polished English version?

CONCLUSION

The intrinsic value of education lies in nurturing people, with human development remaining the core. This is not only the value pursuit of education in the new era but also the essence of basic education reform calling for the presence of life. The presence of individual life relies on the vivid physical existence of students, and embodied learning precisely focuses on the presence of the body. Thus, researching its concept from the perspective of individual life practice is appropriate.

Embodied learning based on individual life practice transcends the traditional fragmented understanding of cognition, the body, and the environment. The body is not merely a physical entity but an integrated life whole of a specific individual, featuring the integration of spirit and body along with the ability to think and perceive. This learning approach not only emphasizes cognitive development but also highlights the sense of subjectivity. It focuses on providing students with space and time for active development based on their existing foundations, facilitating genuine spiritual growth and life development, and ultimately aiming at the realization of life value, enhancement of life quality, and the pursuit of happiness.

Although this study has refined the concept of embodied learning, it faces the issue of the disconnect between theory and practice. This is because the research did not engage in educational settings as a "participant," resulting in a lack of ability to interpret and generalize from practice. In subsequent work, efforts will be made to consolidate the theoretical foundation while participating in practical scenarios. Through comparison, classification, and generalization, the understanding of embodied learning will be further deepened.

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