



# The Bidirectional Value Return of Education and Technology: The Review and Integration Path of Intelligent Education

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**Abstract:** *With the development of artificial intelligence, technology applications have gradually penetrated into educational scenarios. The application of artificial intelligence in the field of education, education is advertised by the pronouns of “efficiency”, “precision” and “individuality”. However, technology is a double-edged sword. The educational application of technology should be carried out under the premise of fully respecting the value of education, and should not be constrained by the “efficiency”, “precision” and “individuality”. Based on the analysis of the alienation phenomenon in the application of artificial intelligence, this article conducts a reflection on the return to the origin of education from the perspectives of ontology, axiology, life theory and technology theory. Finally, it is proposed that education in the era of artificial intelligence should adhere to the people-oriented nature of education, respect the experience of life growth, focus on students’ experiential learning, form a diversified evaluation orientation of generative learning, realize the Bidirectional value return of artificial intelligence and education, and promote the healthy growth of individual life.*

**Keywords:** Artificial intelligence, Life value, Experiential learning, Life growth, Value return.

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## 1. Introduction

With the continuous advancement of educational informatization, the educational innovation led by core technologies such as big data analysis, deep learning, emotional computing and semantic recognition has been very popular and highly praised by education practitioners and education enterprises. Keywords such as efficiency, precision, intelligence and personalization have gradually become the goals that education should pursue. Precision teaching based on big data analysis technology collects, processes and analyzes the data generated in the learning process through internal algorithm models, thereby forming decisions. Personalized teaching can comprehensively record, analyze and visualize students’ learning behaviors, learning foundations, learning preferences and learners’ other characteristics, establish learning models for different learners, and provide personalized learning paths [1], thus generating learning content suitable for learners. Generative AI answers can replace some of the teacher’s work such as homework grading, answering questions and preparing lessons intelligently. The popularization of these educational applications has promoted students’ learning to a certain extent, liberated teachers’ teaching, and greatly improved the effectiveness of teaching practice.

However, the original intention and value of education are prominently manifested in “educating people” and promoting the growth of students’ lives. Jaspers once said that education is the education of the human soul, “one soul awakening another soul.” The meaning of education is to awaken learners’ life consciousness, stimulate life awareness, and cultivate learners’ ability to understand and transform the world. Behind this beautiful encounter between education and technology, the blind worship of technological tools allows the scientific nature of education to be fully utilized, but ignores the nurturing nature of education. The imbalance between technology and education will lead to excessive commonality enforcement, weak innovation ability cultivation, and excessive emptiness in education. Therefore, current education urgently needs to return to the essence of education, rethink



the relationship between technology and education, combine the rational dimension of education with the limits of technology, and explore the path of integrated development of education and technology.

## **2. Analysis of the Phenomenon: Alienation of Educational Application**

With the continuous development of technology, AI technology, data mining, knowledge graphs, emotional computing and other technologies are constantly being applied to education, providing a powerful engine for the innovative development of education. The concepts of learning, teaching, curriculum, teachers, students, schools, evaluation, quality and educational development will all face reconstruction [2]. In the process of deep integration of education and technology, various educational concepts are constantly being deconstructed and reconstructed. The “overstepping” or “misalignment” of technology will inevitably lead to the phenomenon of education being alienated by technology.

### **2.1 Precision Teaching Curbs People’s Free Development**

Precision teaching was proposed by American psychologist Lindsley in 1960 based on Skinner’s behavioral learning theory. It is a method based on specific teaching objectives, which collects, cleans, integrates and converts teaching and learning behavior data, accurately evaluates students’ learning status, and finally generates targeted, scientific and precise teaching strategies. In the whole process, the teaching process is complex, the measurable factors of the learning subject are various, and the measurement of learning behavior content is refined. Early precision teaching was difficult to popularize due to technical conditions such as difficulty in recording and cumbersome operation. With the development of information technology, precision teaching’s educational algorithm models continuously optimize, which results in the measurability, interpretability and accuracy of students’ cognitive, emotional and behavioral data being enhanced. Teachers can adjust teaching content and teaching strategies based on system feedback, and finally achieve teaching goals after continuous revision. It is undeniable that precision teaching can solve the one-dimensional and inefficient evaluation problems in the small data era to a certain extent [3], and improve teaching efficiency, especially in reading and mathematics teaching, showing great superiority [4]. However, the core of precision teaching is the degree of refinement, labeling and measurability of knowledge points, and the goal is to use technology to control students’ learning and meet the established teaching goals. Therefore, this teaching strategy strengthens the importance of “standards” rather than weakening them, and uses educational goals and educational standards to constrain “educational freedom”. This is like military training, where each soldier practices according to the same action standard, and finally trains a uniform army. What modern society needs is people with innovation and adaptability to changes. Precision teaching based on the principles of standardization, process and efficiency seems to be stretched in terms of cultivating the abilities of people with the characteristics of the new era. “Standardization” is more likely to make the people trained more like machines rather than more like people, which is obviously contrary to the original intention of education.

### **2.2 “Personalized Teaching” Weakens the Cultivation of People’s Innovative Thinking**

What makes a person a person is that he is unique and special. Therefore, personalized teaching and teaching students in accordance with their aptitude have always been the ideals pursued by education. However, due to the limitations of educational conditions at that time, “teaching students in accordance with their aptitude” was difficult to implement on a large scale. Nowadays, with the change of teaching paradigm, the concept of personalized teaching has become the mainstream thought in education. It is consistent with the educational thought of “teaching students in accordance with their aptitude”. It refers to a teaching model that takes students as the main body, attaches importance to students’ subjectivity, respects students’ individual differences, and meets students’ different needs [5].

Personalized teaching first appeared in the personalized teaching system proposed by Keller [6]. It is based on technologies such as big data and knowledge graphs, and aims to create a system that “understands” learners. This can reduce students’ learning burden, stimulate learners’ learning interest, and improve learners’ satisfaction to a certain extent. However, technology is something that cannot think like humans. Its “understanding” depends on “algorithms”. Using “algorithms” to analyze learners’ preferences is to think about educational practice completely from the perspective of learners, lacking the most basic value judgment. Moreover, human emotions, consciousness, behavior and actual teaching scenarios are a complex educational ecosystem. Personal emotional judgments and behavioral choices are highly unique and uncertain. This “feeding” teaching method abandons the complexity and life characteristics of education itself, weakens students’ autonomous learning ability, is not

conducive to the cultivation of new era literacy, and ultimately regresses to the educational training paradigm of the industrial era.

### **2.3 AI-assisted Learning Hinders Students' Deep Learning**

As technology continues to promote the innovative development of education, the structure of educational practice has also changed. Educational practice activities that are highly programmed and reproducible, such as homework grading, answering questions, and intelligent lesson preparation, are being replaced by technology. The technological advantages of fast response speed, low fault tolerance, and high efficiency occupy a dominant position in education. If the value of education is merely the function of imparting knowledge, then technological substitution is undoubtedly a good choice. However, education is an organic unity of knowledge imparting and value guidance. Value guidance, as the shaping of human souls, occupies a dominant position in education, while the essence of technology lies in the establishment of technical standards, the operation of technical procedures, and the creation of a technical environment [7], and does not have human attributes.

In the process of human-computer collaboration, AI solutions can only generate answers based on pre-programmed rules and algorithms, and cannot understand and solve problems through language and emotional communication like humans. This generative solution lacks communication and emotional resonance, is not inspiring, and may even hinder people's imagination. Imagination is a specific mode of internal state and cognitive process possessed by humans, and is a necessary condition for human existence [8]. In addition, AI solutions can often only provide shallow knowledge and experience, and cannot guide learners to think and learn in depth. This may cause learners to remain in a shallow learning state. Deep learning is to trigger students' thinking through teacher-student interaction, stimulate students' learning initiative and participation, and teachers and students jointly reconstruct and create the meaning of knowledge, rather than a simple dialogue. This process is inspiring, communicative and emotional. In the process of deep interaction, teachers and students exchange knowledge, spirit and wisdom, awaken learners' consciousness, stimulate life power, and demonstrate and promote the meaning of life. This is the value of education.

## **3. Philosophical Reflection: Bidirectional Value Return of Education and Technology**

In the field of education, the updating and replacement of teaching tools also means changes in the teaching structure and the deep meaning of teaching [9]. Driven by technological tools, the balance of educational value gradually tilts towards educational efficiency, teaching strategies and academic achievement. Students' mental and psychological qualities are estimated by data, while the human soul and life value are excluded from the "algorithm", resulting in the neglect of the individual's spiritual world and personal dignity, and the "torn apart" of individuals with life meaning by technology [7]. As an extension of the human cognitive world, technology should play an objective role, not dominate education. In the process of technology constantly accelerating the reform of education, we have to return to the origin of education, carefully think about the origin of education, and rationally view technology to promote the bidirectional value return of education and technology.

### **3.1 Ontology: Adhering to the Principle of "Being Human"**

Educational ontology is a study of the origin, essence, existence and development of education. In different periods, influenced by social and economic systems and culture, educational ontology has evolved from "thinking ontology" to "generative ontology". Under "thinking ontology", the meaning of human existence in education is to master knowledge and understand the external world, while "generative ontology" is guided by Marx's dialectical materialism and emphasizes that education is a life process in which teachers and students create the meaning of life [10]. Based on the materialist historical view of the origin of education, some scholars have proposed that education is the self-directed transmission of the super-biological experience that humans have acquired, thereby promoting the formation of individual people, promoting the development and perfection of the entire human race, and realizing the reproduction and re-creation of human beings [11]. From the above explanation of the essence of education, it can be seen that the subject of education is human beings.

As an educational object, human beings have complex attributes. Marx pointed out that human beings are the sum of all social relations. It includes human natural attributes and social attributes. Natural attributes refer to human beings' internal attributes, which are innate. The internal structure of the human body is quite complex. Physiological psychology research has found that the human brain is a complex structure, and the nervous system is an extremely complex functional system composed of neurons [12]. From the perspective of cognitive

psychology, cognition is a complex system composed of perception, memory, reasoning and other activities. They do not regard cognition as a single activity, but as a complex system composed of a group of related activities [12]. Social attributes refer to the sum of the relationships between people based on educational practice. They are acquired, changing and developing, and are not eternal and unchanging.

The characteristics of human beings are the richness, subtlety, diversity and multifacetedness of their nature [13]. Human diversity leads to the complexity of education, which has the characteristics of openness, diversity, nonlinearity, emergence and chaos [14]. However, the algorithmic thinking of current technology is linear, logical and preset, and cannot handle educational practice activities with divergent characteristics such as emotional attitudes, values and free will. In the process of interaction with learners, technology lacks emotional resonance and is not inspiring. Therefore, in the process of educational practice, we need to be people-oriented, pay more attention to people's psychological growth and value formation, and look at the applicability of technology rationally, do not blindly exaggerate the application effect of technology, use technology applications reasonably, and avoid dependence on technology and learning inertia.

### **3.2 Axiology: The Challenge of Talent Mission to Technology in the New Era**

Value is the real relationship between the needs of the subject and the attributes of the object. In the field of education, different perspectives, different subjects, and different times will produce different educational values. From a social perspective, the social demand for talents is the value of education. With the advent of the era of artificial intelligence, the social industrial structure has undergone tremendous changes. Labor-intensive industries are constantly transforming. Rapid knowledge updates and the replacement of replicable labor by technology have become the main characteristics of this era. Independent thinking ability, innovation ability, and moral literacy, which are difficult to acquire through technology, have become the value of education. The reports of the 18th and 19th National Congresses of the Communist Party of China both pointed out that “cultivating morality and educating people” is the fundamental task of education. This undoubtedly gives the value-leading function of education a basic, central, and leading position in the various tasks of education development in the new era [15].

Educational practice should focus more on the cultivation of innovative ability, rather than just the imparting of knowledge. Innovative ability is not a single ability, but a comprehensive ability of many factors such as knowledge, skills, emotions, and thinking. It is a huge engine that drives social development. People acquire survival skills and innovative ability through education. The higher the level of education, the stronger their ability to adapt to and transform society. After entering society, people constantly update their knowledge and abilities in the process of labor, continuously transform society, and continuously promote social development. In the “dual intelligence” world where human intelligence and artificial intelligence coexist [16], rational thinking such as experience induction and logical reasoning can be easily recognized by artificial intelligence and easily replaced [17]. Innovative ability, a combination of rationality and sensibility that is different from machines, is even more precious.

In traditional education, emotions and experiences are transmitted through the interaction between teachers and students, and finally the process of value shaping is completed. The intervention of technology has broken the traditional teaching structure based on teachers and students, and formed a “three-dimensional interactive” teaching relationship between teachers, technology and students. The intervention of technology with procedural, dependent and emotionless attributes has weakened the teacher's function of imparting knowledge and solving doubts. The visibility and measurability brought by technology have gradually lost the humanistic dimension of education. Under the requirements of the era of moral education, technology-only education is not feasible. The application of technology needs to be based on value education, uphold the position of instrumentalism, use technology as a medium, and build a bridge of communication between teachers and students. It should be known that the demand for talents in the new era society is not only the demand for skills and knowledge, but also ideology and value orientation are the most important goals in talent training.

### **3.3 Life Theory: Shaping Life is the Starting Point and Destination of Technology**

The object of education is human beings. General Secretary Xi Jinping pointed out that “what kind of people to cultivate, how to cultivate people, and for whom to cultivate people” are the fundamental issues of education. Tracing back to the source, the origin of education is life. The definition of life in Western philosophy is a complex of body and consciousness. Human beings and animals are both life, but they are essentially different. Human beings have “human” attributes, which are a collection of generative, creative, social and other attributes. That is,

human beings are unspecified, uncertain and incomplete [18]. Human beings will not always be in a certain state, but will constantly improve themselves and break through themselves in the process of social interaction with the surrounding environment, and at the same time generate new selves, and so on, and finally achieve self-realization.

In fact, human self-realization is the self-transcendence of life. In addition to its natural attributes, life also focuses on its “value” attributes, which are mainly manifested in the transcendent nature of human beings and their pursuit of truth, goodness, and beauty, and ultimately tend to the realization of freedom [18]. As another form of life existence, value life has a strong connection with society and culture. It is through education that cultural and social attributes are added to life, making individual life socialized, personalized, and professional. Facing life, respecting life, shaping life, and promoting life’s “life consciousness” are the foundations of education.

Technology is an external force of education. It aims to serve education and takes the growth of human life as its starting point and destination, rather than the production of goods centered on technology. “The object of education of the ancients was the true nature of life, the content of education was the study of life, and the path of education was from the inside out [19].” Maslow’s hierarchy of needs theory divides personal growth into intrinsic motivation and extrinsic motivation. Intrinsic motivation is the motivation of people to understand and explore the world. It comes from the motivation of the origin of life. Intrinsic motivation is the external motivation of people. It is not sustainable and needs to be stimulated and strengthened by external events continuously. The growth of individual life is a complex process generated from within, which requires multiple transformations of behavior, thinking, and thoughts [20].

Technology is an external thing. In the process of human learning, it is an external motivation of human beings. If it is separated from the self-consciousness of life growth and excessively strengthens the role of external motivation through control and discipline, it will not benefit the growth of individual life. In the process of human-machine collaboration, people should be the main body and technology should be auxiliary. We should always care about life, awaken people’s life consciousness, stimulate people’s inner “life consciousness”, “realize and enhance people’s life value, and demonstrate and promote the meaning of people’s life” [7].

### **3.4 Technology Theory: Eliminating the Corrosion of the Concept of Technology First**

Since its emergence, technology has been an extension of human understanding of the world, and its purpose is to improve efficiency. In the era of artificial intelligence, educational applications are created to improve the efficiency of knowledge transfer. Its acceptance depends on whether it narrows the gap between educational output and educational preset goals, and whether it helps education complete more tasks in a shorter time [21]. In addition, the manifestation of educational applications is “computationalization”, which is essentially based on quantification of positivism. Its internal core has a set of quantitative standards. Its process is to collect, process, and analyze data such as students’ behavior, language, and learning results in educational practice to obtain students’ learning status and make educational decisions. In the practice of artificial intelligence educational applications, “standardization” abandons the diversity and complexity of people and promotes the unification and homogenization of people. Moreover, “the value positioning of prediction may lead people to data determinism, which is prone to the ‘labeling’ effect [22].” Although we always emphasize that all data-based teaching evaluations are objective, we must remember that data is impersonal and meaningless in itself. Its meaning still comes from the people who analyze it.

Education is a special field. Human thinking, emotion and behavior are a complex system. The complexity of human beings will inevitably lead to the complexity of education. The complexity of education should not be labeled as efficiency. “We need to pursue tasteful and spiritual practices in a slow process and guide students to experience learning [23].” Excessive worship of technology will reduce education to mechanized knowledge indoctrination and skill training. It will also become a shackle that constrains students’ thinking and innovation, making education monotonous and homogenized, and resulting in education without its soul. Therefore, in the future process of integrating artificial intelligence and education, it is necessary to find a balance between the rationality of technical tools and the humanistic dimension of education to promote the high integration of technology and education.

## **4. Possibilities and Boundaries: Integration of Education and Technology**

Artificial intelligence is based on algorithms and represents objective things according to preset standards. It is a rational behavior activity. Although machine learning attempts to simulate and realize human thinking and learning,

its non-human attributes are still its main characteristics. In educational activities, education is both educating and scientific. Being educating means that education can evoke relevant images in the minds of learners, promote human thinking activities, and give people a beautiful life growth experience, thereby gaining a certain value of life. Being scientific means that education has its own educational laws and is a rational behavior that conforms to the laws of natural development. The application of artificial intelligence cannot cross the boundaries of educational science. If artificial intelligence occupies a dominant position and education is only data-based and standardized, it will stifle human freedom and cause education to deviate from the normal track. Therefore, we must clarify the “can” and “no” of artificial intelligence, actively integrate and seek change.

#### **4.1 Adhering to the People-Oriented Nature of Education**

Technology is a “double-edged sword”. Whether the technology is used appropriately or not determines whether it promotes or inhibits education. In the process of the mutual development and integration of technology and education, education often suffers from “travails”. The appearance of these “travails” is often the result of the conflict and mutual adjustment between different technology applications and educational concepts. In essence, it is the mutual game of “subject status” between educational subjects. Therefore, in the process of technology intervention in education, we must always adhere to the people-oriented principle and respond to the “ever-changing” technology with the unchanged essence of education.

On the one hand, technology should be based on respecting life and enhancing life vitality. The value of life is the basic value of education, and the spiritual energy of life is the basic component of educational transformation. The intrinsic and transcendent nature of life is destined to be incalculable by technology. Talking about technology without considering the life characteristics of education will make education take the path of data-only and efficiency-only values. If life is forcibly symbolized and materialized, individual students will become the object of education and the product of technology, losing their unique personality and vitality. Education will take the path of industrialized production, which violates the objective laws of education. Therefore, we should make it clear that technology is only an auxiliary means of education, not the core of education. In the process of education, we must adhere to the people-oriented nature of education, respect the life characteristics of individual students, and pay attention to their growth and development. Through personalized teaching methods, guide students to explore their potential and interests, cultivate students’ innovative ability, and make them people with “vitality”.

On the other hand, education should actively accept the advantages of technology with an inclusive attitude. The integration of information technology such as artificial intelligence and knowledge graphs with education has become an inevitable trend. In this irreversible trend, education should actively accept the integration of technology based on the principles of innovation, inclusiveness and fairness. In the process of human-machine collaboration, we should properly handle the relationship with technology and do a good job in positioning our role in the field of education. As an extension of human understanding of the world, technology has been used to make up for human defects and transform nature since its production. As a natural person, the cognitive load of the brain leads to limited ability to receive and store information, and technology can completely overcome this defect. Linear, reproducible and repetitive work can be replaced by artificial intelligence. However, the unique human field based on nonlinearity, thinking and emotionality of innovation cannot be replaced by artificial intelligence. This aspect is the role positioning in the “human-machine” relationship that we need to consider.

It can be seen from this that in the process of human-machine collaboration, we should grasp the value of education, make use of the technological advantages of artificial intelligence and the natural human advantages of teachers, seek the balance between technology and education, promote the complementary advantages of the two, and pursue educational efficiency under the healthy growth of individual life.

#### **4.2 Focusing on Students’ Experiential Learning**

The significance of education is to enable students to experience and personally go through the process of life growth. In modern cognitive science, the embodied cognition view represented by Merleau-Ponty believes that the concepts of “perception” and “body” occupy an extremely important position. “Perception” is the core foundation of human cognition, and “body” is the greatest prerequisite for the realization of “perception”. It is a subjective existence with perceptual consciousness [24]. People produce perception and cognition through the interaction between the body and the world [25]. Embodied cognition emphasizes the importance of the body in the cognitive process, which can be understood from three aspects: “embodiment”, “contextuality” and “experience”: “embodiment” of cognition means that the body actively participates in cognitive activities during

the cognitive process, not passively; “experience” of cognition refers to the feelings and experiences of the body during the cognitive process, that is, the body experience shapes the content, method and result of the subject’s cognition [26]; “contextuality” of cognition emphasizes that the learning situation in which the body is located has an important influence on cognitive activities, which can trigger the participation of multiple sensory channels such as hearing, vision and smell, thereby strengthening the subject’s cognitive state. Based on this, the core of experiential learning is that the construction of knowledge is achieved through individual personal experience, emotional involvement and in-depth interaction with specific situations. This learning method emphasizes students’ learning initiative and participation.

In the process of experiential learning, rich teaching situations can play a huge role in promoting teaching. Rousseau paid great attention to the educational environment in the process of educating Emile [27]. The intervention of technology has brought unlimited possibilities for the construction of rich and interactive learning environments and learning experiences. It can arouse students’ learning interest and enhance their learning experience by creating a rich learning environment. For example, virtual reality technology has the characteristics of immersion, interactivity and imagination, which provides unlimited possibilities for enhancing students’ learning experience. It can be used to represent abstract knowledge in concrete forms or simulate real scenes that are usually inaccessible, providing students with opportunities to give full play to their life experience and conduct situational learning. Tools such as knowledge graphs and semantic networks can help learners understand the semantic relationship between various viewpoints and deepen their understanding of knowledge. Generative artificial intelligence, with the help of natural language processing technology and through a large amount of data training, can respond to students’ confusion in the learning process in a timely manner and provide personalized learning resources. In the teaching process, teachers can stimulate students’ interest, enhance their learning experience and improve their learning involvement by setting reasonable, challenging and spiral learning tasks and using appropriate technical means. Through human-computer collaboration, we insist on taking people as the main body and technical tools as the auxiliary, integrate the rationality of technical tools with the rationality of educational values, and transform “feeding-style” learning into experiential and personal learning, enhance students’ emotional experience in the learning process, and ultimately promote the healthy growth of students’ individual lives.

### **4.3 Practicing a Diversified Evaluation Approach for Generative Learning**

As big data has become popular, some scholars advocate that everything can be measured, emphasizing the authority, objectivity and importance of big data analysis. However, we can easily find that some so-called mature data analysis is actually based on quantitative analysis of learning results, such as taking students’ academic performance, online click-through rate, viewing time, number of discussions and other online learning behaviors as the basis for evaluation, and finally forming a learning analysis report after simple processing. This single-dimensional evaluation system cannot truly reflect the students’ growth level.

Education is a complex and dynamic system that has both scientific and educational characteristics. The scientific rationality of education can be quantified by data, while the educational nature of education emphasizes more on the humanistic dimension of education and cannot be quantified by data. Therefore, evaluation cannot be simply a single quantitative evaluation, but requires a combination of quantitative and qualitative methods, combining the objective data of positivism with the subjective ideas of interpretivism, to achieve a transformation from result-oriented evaluation to process-oriented evaluation, and to comprehensively evaluate the students’ growth process. In terms of quantitative evaluation, we should emphasize the accuracy and reliability of data, and conduct “value-added evaluation” on students’ academic performance, professional ability, physical fitness and language ability through scientific statistical analysis or data analysis models. Quantitative evaluation also needs to respect individual differences of students, that is, it should fully take into account the unique starting point and differentiated growth trajectory of individual students, and cannot adopt a “one-size-fits-all” evaluation standard. It is necessary to conduct personalized evaluation according to the specific situation of students. In terms of qualitative evaluation, we should pay attention to the insight and understanding of students’ subjective experience, pay attention to students’ inner world and growth needs, and deeply analyze the growth of students’ emotions, attitudes, values and other non-quantitative aspects through in-depth observation, interviews, text analysis and other evaluation methods. The teaching process is a dynamic and generative knowledge generation process. The student subject constantly evolves and develops in the interaction with teachers and classmates, and jointly constructs knowledge. Therefore, teaching evaluation should take generative learning as the basis and construct a multi-subject and diversified evaluation model in which teachers, classmates and students themselves participate.

In addition, education is a beautiful process of awakening life consciousness and realizing the value of life. It focuses on the process of enjoying life growth rather than the final result. Evaluation based on learning results has deviated from the original intention of education. We should refocus on students' generative learning evaluation and attach importance to students' learning and growth process. Teaching evaluation is a means of discovering learning problems and a way to promote learning. Teaching evaluation aims at increasing students' knowledge and abilities, not proof or accountability [28]. We should avoid putting the cart before the horse and using evaluation as a tool to assess whether students are good or bad, and fall into the trap of data-only theory.

## 5. Conclusion

2022 is considered by scholars in the industry to be the first year of the development of artificial intelligence. The application of technologies such as AI and big data analysis technology in the field of education is booming. The human-machine collaborative education model will inevitably be the norm in the future. We should actively welcome the arrival of artificial intelligence rather than passively accept it. Active acceptance can enable education to occupy a major position in the entire process of educational development, and enable in-depth understanding and active pursuit. This article examines the relationship between education and technology from the perspectives of ontology, axiology, life theory, and technology theory. It advocates that when dealing with the relationship between education and artificial intelligence, education should not exaggerate the technical advantages of artificial intelligence and fall into the process-based and standardized industrial production cycle of "efficiency", "precision" and "personality". Instead, it should adhere to the essence of education, respect the laws of educational development in a way that remains unchanged in the face of ever-changing situations, actively explore the path of integrated development of artificial intelligence and education, so that technology and people can form two effective forces, realize the bidirectional value return of education and technology, and jointly promote the healthy and happy growth of individual life.

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## References

- [1] Jiang Qiang, Zhao Wei, Wang Mingjiao, et al. Realization of Individual Adaptive Online Learning Analysis Model Based Big Data[J]. *China Education Technology*, 2015 (1): 85-92.
- [2] Wang Jiayi, Lu Zixiao. Avoiding Ethical Risks: The Chinese Wisdom for the Returning to the Origin of Education in the Age of Intelligence[J]. *Educational Research*, 2020(2):47-60.
- [3] Viktor Mayer-Schönberger. *Learning with Big Data: The Future of Education*[M]. Shanghai: East China Normal University Press, 2017: 110.
- [4] Zhu Zhiting, Peng Hongchao. Technology Enabled Efficient Teaching of Knowledge: Activating the Power of Precision Instruction [J]. *China Education Technology*, 2016 (1): 18-25.
- [5] Yang Lina, Zou Xia et al. Mind Mapping's Inspiration for Personalized Teaching and Its Value of Application [J]. *Modern Educational Technology*, 2009 (3): 119-121.
- [6] He Kekang. Theories, Theory, Techniques, and Approaches in Promoting "Personalized Learning": Reflection on the Handbook of Research on Educational communications and Technology (Fourth Edition) [J]. *Open Education Research*, 2017 (2): 13-21.
- [7] Zheng Gang, Yang Yanru, et al. The Realistic "Marriage" between Life Value and Technological Change: A Philosophical Reflection Based on Application of Artificial Intelligence in Education[J]. *E-education Research*, 2021 (3): 12-26.
- [8] Christoph Wulff. *The Image of Man: Imagination, Performance and Culture*[M]. Translated by Chen Hongyan. Shanghai: East China Normal University Press, 2018: 44.
- [9] Zhang Wunong. "Technological Theory" of Educational Philosophy in the Age of Artificial Intelligence and Its Domain [J]. *E-education Research*, 2019 (5): 25-31.
- [10] Chi Yanjie. Transformation of teaching ontology: "from thinking ontology" to "generative ontology" [J]. *Educational Research*, 2001 (5): 57-61.



- [11] Sang Xinmin. Calling for the educational philosophy of the new century: exploring the mystery of human self-production [M]. Beijing: Educational Science Press, 1993: 116.
- [12] Cai Canxin. Transition of Education Ontology and Complexity of Educational Entity -Educational Ontology Study in the Context of complex Thinking Pattern CAI Chan-xin [J]. *Theory and Practice of Education*, 2006 (9): 6-9.
- [13] Ernst Cassirer. *An Essay on Man* [M]. Translated by Gan Yang. Shanghai: Shanghai Translation Publishing House, 1985.288.15.
- [14] Wang Zhijun, Chen Li. Connectivism: the ontology of “Internet Plus Education” [J]. *Chinese Journal of Distance Education*, 2019(8):1-9.
- [15] Zhang Mingkai, Jin Yule. The Practical Logic and Promotion Mechanism of the Foster Virtue Through Education[J]. *China Educational Technology*, 2020 (8): 7-13.
- [16] Zhong Kai. The Coming Era of Binary Intelligence and Its Impact on Education Practice[J]. *Nanjing Journal of Social Sciences*, 2018 (11): 137-143.
- [17] Li Haifeng, Miao Wensheng. Challenges and Solutions: Colleges and Universities in the Age of Artificial Intelligence Should Pay Attention to the Education of Value Judgment [J]. *China Educational Technology*, 2020 (2): 43-49.
- [18] Feng Jianjun. On the Life Stand of Pedagogy[J]. *Educational Research*, 2006(3):29-34.
- [19] Wang Jiayi, Lu Zixiao. Avoiding Ethical Risks: The Chinese Wisdom for the Returning to the Origin of Education in the Age of Intelligence[J]. *Educational Research*, 2020(2):47-60.
- [20] Liu Geping, Qin Yuchao. Review the Connotation of Wisdom: On the Wisdom and Development of Smart Education[J]. *Modern Distance Education*, 2021(4):48-58.
- [21] Zhu Dequan, Xu Lili. The Coupling of Technology and Life Dimension: Orientation of “Future Education” [J]. *China Educational Technology*, 2019(9):1-6.
- [22] Liu Sannuya, Yang Zongkai. Education Data Ethic: The New Challenge of Education in Big Data Era[J]. *Educational Research*, 2017 (4): 15-20.
- [23] Qin Dan, Zhang Lixin. Reconstruction of Teacher’s Role in Man-machine Cooperative Teaching[J]. *e-Education Research*, 2020 (11): 13-19.
- [24] Yuan Lei, Liu Woqi. Technological anxiety and cognitive misunderstanding in the education field in the intelligent era - a contemporary reflection based on Merleau-Ponty’s embodied cognition[J]. *Modern Distance Education*, 2024(1):14-20.
- [25] [France] Maurice Merleau-Ponty. *Phenomenology of Perception*[M]. Translated by Jiang Zhihui. Beijing: Commercial Press, 2001.
- [26] Yin Ming, Liu Dianzhi. Learning with the integration of body and mind: embodied cognition and its educational connotations[J]. *Curriculum. Teaching Materials. Teaching Methods*, 2015(7):57-65.
- [27] Rousseau. *Emile on Education, Volume I*. Translated by Li Pingfu. Beijing: Commercial Press, 1978: 106.
- [28] Zhou Yurong. The dual dilemma of university teaching evaluation and its solution[J]. *Journal of Higher Education*, 2019(10):75-81.

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