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The Nature of Educational Alienation in the Era of Artificial Intelligence and Pathways to Its Resolution

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ABSTRACT Artificial intelligence is advancing the modernization of educational reform, but it is also deepening educational alienation. By examining the roots of educational alienation, this article argues that such alienation originates in the institutional demand for efficiency and benefit generated by political and economic development. This demand is first established through the state's functional positioning of education, namely the cultivation of talent needed for national development, and is then transmitted to families and individuals through social distribution. It appears as excessive competition for class mobility through education. As a result, alienated educational purposes manipulate human beings into becoming tools for realizing external goals. In the AI era, human desire for the unknown and for mastery over the operation of the world is entrusted to advanced technology, resulting in the alienation of both educational subjects and educational objects. Object alienation appears as the alienation of the essence of school education, the understanding of educational knowledge, and educational media. Subject alienation appears as the dissolution of subjectivity. Resolving educational alienation in the AI era requires a clear understanding of the utility and limits of AI in education, a practical shift from basic control to modern governance, and the construction of a pluralistic educational evaluation system.

INDEX TERMS Artificial intelligence, educational alienation, subjectivity, social stratification, value rationality.

I. INTRODUCTION

The Outline for Building China into a Leading Country in Education (2024-2035) explicitly proposes a strategic plan to promote AI-enabled educational transformation [1]. In practice, however, significant regional differences in infrastructure and teachers' digital competence, together with the tension between technological empowerment and humanistic care, have become major contradictions that urgently require resolution. Educational digitalization has become a core component of building educational strength, and technology-driven systemic reform in education is entering a critical window [2].

The widespread use of AI and related technologies has also produced many educational disorders. Human subjectivity faces a crisis of overstepping by technology, and the problem of educational alienation has become increasingly severe. In educational practice, this alienation appears mainly as excessive dependence on technical tools, the contraction of educational purposes into performance and measurable outcomes, and the continuing dissolution of teacher and learner subjectivity within institutionalized processes. These specific manifestations make educational alienation identifiable in reality and provide the starting point for the analysis in this article.

Educational alienation extends Marx's theory of alienation into the field of education. Wang Ruoshui, in summarizing relevant ideas of Hegel, Feuerbach, and Marx, identified three levels of alienation: first, the subject and object exchange positions; second, the object is not externally imposed but arises from the subject's own activity and originally belongs to the subject; third, the object turns back to dominate and suppress the subject, leaving the subject in a state of unfreedom [3]. On this basis, educational alienation refers to a process in which benefit-oriented objects derived from education itself, such as official position and credentials, rise to the status of goals and then dominate educational subjects. Human beings become means for realizing utilitarian educational goals, and education departs from its essence of promoting healthy and comprehensive human development.

In the AI era, this alienation is further manifested as the overstepping of intelligent technology into human subjectivity and the deep distortion of educational purposes. As an applied technology, why does AI continue to intensify human alienation within educational alienation? At the surface level, inappropriate use of intelligent technology appears to cause educational alienation. Yet if human beings are the subjects of education, why are they counteracted by technology and alienated by it? What is the essence behind this process? These questions make it necessary to trace the historical context of educational alienation and to examine the deeper essence behind its external manifestations in the AI era, so that pathways for responding to the crisis can be identified.

II. HISTORICAL FEATURES OF EDUCATIONAL ALIENATION

With historical development, the spontaneous relationship between human beings and nature has been transformed into a self-conscious relationship, and education has likewise moved from spontaneous education to self-conscious education [4]. Political and economic development has caused the alienation of self-conscious education, with different manifestations in different periods, countries, and societies. Table I summarizes the historical features of educational alienation in China. Regardless of historical change, educational alienation first appears as alienation of educational purpose.

TABLE I
HISTORICAL FEATURES OF EDUCATIONAL ALIENATION IN CHINA

Period	Alienation Features	Educational Level
Primitive communal society	None	Spontaneous education
2070 BCE to 476 BCE	Educational privilege and maintenance of ruling-class interests	Self-conscious education
475 BCE to 1839	Class mobility and political governance	Self-conscious education
1840 to 1948	Political education	Self-conscious education
1949 to 1982	Political education	Self-conscious education
1983 to 1998	Class mobility and social construction	Self-conscious education
1999 to present	Means of power, subject alienation caused by technology dependence, and object alienation reflected in the digital divide in educational resources	Alienated self-conscious education

Note: This table translates and regularizes the source article's periodization of educational alienation in China.

A. The Developmental Context of Educational Alienation

Education in the primitive communal period was spontaneous education. There were no teachers, schools, classes, or political and economic additions; labor itself was education. After the emergence of slave society, specialized educational places, namely schools, appeared, and education began to serve the interests of the ruling class. After the Eastern Zhou period, education increasingly oriented itself toward political needs. In particular, after the imperial examination system was established, education became both an important means of consolidating imperial power and a major path for individuals, especially children from poor families, to achieve social mobility [5]. This model continued into the early twentieth century.

After the Opium War, Western culture and educational thought challenged traditional Chinese education and shook its foundations. In 1906, the imperial examination system was abolished, and a modern educational system emerged [6]. After the founding of the People's Republic of China, Chinese education drew on several international educational models of the time, and educational goals became closely connected with the overall national development strategy. In 1983, under the principle that education must serve socialist construction, higher education adopted targeted enrollment and job assignment, providing upward channels for talent in economically underdeveloped regions. After the 1990s, as demand for talent increased, the social stratification function of education became more prominent, and the belief that education changes destiny became deeply rooted. In the twenty-first century, driven by a new round of technological revolution, AI has accelerated the intelligentization of education while also intensifying educational alienation, manifested in technological worship, entertainment-oriented tendencies, and value conflicts [7].

Across the historical evolution of educational alienation, politics and economics have been its main driving forces. Education has been treated by the state as a tool of human capital and by individuals as a means of class mobility. Under this value premise, educational purpose, educational rights, and some educational content have gradually departed from the original intention of self-conscious education centered on value rationality.

B. Alienation of Educational Purpose: Human Instrumentality

The state and individuals treat education as a means for realizing goals because education has significant economic benefits. Educational investment brings not only economic returns but also non-economic returns. Under the logic of capital, however, human beings are regarded as tools for creating wealth, the pursuit of life is concentrated on wealth creation, non-economic benefits are ignored, and economic benefits are infinitely magnified or even treated as the only value [8].

For individuals, the higher the level of education, the greater the signaling value of credentials, namely the capacity to obtain information, and the higher the expected future wage [9]. Education can therefore increase labor productivity and generate productive returns [10]. At the national level, education promotes productivity and economic growth by improving the overall level of human capital. Especially under excessive educational competition, education is regarded as an important path for class mobility. Individuals attempt to achieve social mobility through the human capital represented by educational credentials and

through its conversion into occupational opportunities. Yet education itself does not directly produce stratification. Its stratifying function depends on the value of credentials as an intermediary and on equality of access to educational opportunities.

History shows that credentials are not omnipotent, and opportunities are not available to everyone. Educational fairness under the imperial examination system was essentially limited fairness. It offered entry for the poor while restraining the rich, and it used state power to maintain fairness across regions and between examiners and candidates. In an unequal world, this was limited fairness [11]. Yet this limited fairness was long regarded as absolute fairness, and the imperial examination was widely recognized as a path to official career and class mobility.

In modern society, with the expansion of educational opportunities, credential inflation has occurred, degrees have continued to depreciate, and urban-rural differences in educational opportunities have widened. The possibility of achieving class mobility through education has therefore declined. Data show that the number of college graduates in China in 2025 was expected to reach 12.22 million, intensifying employment pressure and structural contradictions [12]. For rural students, although urbanization of education and higher education expansion have not reduced their absolute number of enrollments, they have expanded the gap in higher education opportunities between urban and rural areas [13]. This has reduced, to some extent, the possibility that rural students can achieve class mobility through education. At the same time, the gap between job supply and graduate scale continues to widen, and the employment rate of college students has declined. The realistic foundation of the belief that education changes destiny is increasingly shaken. When education can no longer directly deliver economic return, society must rethink its fundamental expectations of education.

From the history of educational development, education has repeatedly been alienated into a means for realizing external purposes, and human beings have been alienated into tools. As Kant argued, rational beings should not be treated merely as means but always as ends in themselves [14]. In modern education empowered by AI, human instrumentality now assumes new forms of alienation.

III. EXTERNAL MANIFESTATIONS OF EDUCATIONAL ALIENATION IN THE AI ERA

With the widespread application of AI in education, education has entered a new round of reform. Yet people have not fully recognized the negative effects that misuse and overuse of AI bring to education. Technological worship has produced an urgent crisis of alienation in education, mainly reflected in the alienation of educational objects and the alienation of educational subjects.

A. Alienation of Educational Objects: Education Alienated by Human Beings

In the AI era, alienation of educational objects is mainly manifested in three aspects: alienation of the essence of school education, alienation in the understanding of educational knowledge, and alienation of educational media.

The non-permanence of knowledge determines that school teaching cannot merely aim at knowledge transmission. It should use teaching activities to reveal the openness and developmental character of knowledge in serving innovative thinking and the pursuit of truth [15]. Traditional school education has functions such as knowledge centralization, socialization, and the legitimation of education. Yet the educational spirit of modern schools is becoming alienated. Under pressure from standardized assessment and performance orientation, teaching goals are simplified into scores and examination orientation is reinforced. In smart-classroom settings, teaching revolves around system instructions and data feedback, teacher-student interaction is compressed, and students become trained learning executors. Schools gradually become one-way sites for the transmission of knowledge and skills.

In this sense, school education centered only on knowledge transmission may indeed be replaced by AI. AI is superior to teachers in the efficiency of knowledge transmission and in limited forms of integration and innovation. However, AI's impact on school form is not essentially functional substitution, but a tension between technological empowerment and the humanistic value of schools. The real questions are whether education can be fully carried by technology and whether schools truly fulfill their socializing function and humanistic responsibility. Correctly understanding the dialectical unity between school and technology and reexamining and correcting the essence and function of school are therefore key paths for reshaping the value of school education [16].

Understanding the essence, value, and acquisition of knowledge is the premise for choosing learning methods. Knowledge determines method. If method is emphasized while the structure and nature of knowledge are neglected, education falls into a method-centered and method-only misunderstanding. AI has distinctive advantages in organizing, summarizing, and visualizing knowledge. Yet excessive dependence on it will further marginalize educational content that is difficult to quantify or visualize but remains important, such as creativity, imagination, interpersonal development, and related educational aims. Moreover, AI is not necessarily good at processing all types of knowledge. In Chinese contexts, for example, AI still lacks strong understanding of implicit and metaphorical questions [17]. If policymakers and educational practitioners neither handle the dialectical relation between knowledge and method correctly nor clearly understand the limits of AI, a one-sided emphasis on advanced technology will only intensify educational alienation.

Alienation of educational media appears when, under the impact of advanced technology, both educational administrators and learners lose interest in traditional modes of knowledge transmission and even judge them negatively. Educational media have passed through stages such as cloth and silk, bamboo slips, books, and multimedia technologies. They have delivered knowledge to human beings, but changes in media have also indirectly reduced the possibility of human beings receiving knowledge. Because human-machine interaction technology remains immature, the acceleration and excessive intervention of information technology in education have weakened the intimacy and familiarity with knowledge that require embodied perception. Estrangement from knowledge has gradually produced media alienation based on dimensions such as technical rationality and value rationality.

B. Alienation of Educational Subjects: Human Beings Alienated by Education

In the AI era, the alienation of educational subjects shows differentiated features. On one hand, teachers' professional roles are continuously deconstructed through the intervention of technical systems and algorithmic logic. On the other hand, students' development is more clearly manifested as the narrowing of cognitive paths and emotional experience, which restricts their subjectivity and holistic growth.

Teachers currently face continuing pressure from multiple responsibilities and performance requirements. The introduction of AI teachers into education and teaching is regarded as a technical path for reducing teachers' burden. From a relational perspective, AI teachers are gradually taking diverse functional forms and show relative advantages especially in indoctrinating and procedural teaching [18]. However, when AI with a certain degree of professional teaching intelligence enters the classroom and is used to benchmark the role expectation of human teachers as transmitters of values, knowledge, and problem-solving, the professional function of teachers is split, outsourced, and redistributed to technical systems. The irreplaceability of human teachers is thereby structurally weakened. At the same time, rapid technological iteration continuously raises demands for teachers' skill renewal, pushing them into endless technical learning and training. The teacher's role shifts from a guide of knowledge and meaning to an adapter and executor of technical systems, revealing the real predicament of continuous deconstruction by technological logic.

While AI improves learning efficiency and personalization, it also compresses the development space of student subjectivity at cognitive and emotional levels. First, relying on strong data collection and integration, intelligent systems automatically calculate students' current learning needs and customize personalized learning plans. The right to judge how to learn is transferred from students to technical systems [19], and students' independent thinking and problem-solving abilities gradually weaken. Second, algorithm-driven information recommendation constantly reinforces interest preferences and limits students' exposure to heterogeneous knowledge and diverse viewpoints. Cognition becomes increasingly singular and self-centered, solidifying cognitive comfort zones. Third, excessive reliance on AI in teaching practice weakens real interaction among students, teachers, and peers based on emotional resonance and meaning construction. Emotional experience and intersubjective development are suppressed, thereby constraining students' holistic growth.

Both object alienation and subject alienation are external manifestations of alienation. Seeking paths to prevent educational alienation only at the formal level usually leads merely to partial correction of surface problems and cannot reach their deeper roots. It is therefore necessary to analyze the essence of educational alienation in order to identify possible pathways for resolution.

IV. ESSENCE OF EDUCATIONAL ALIENATION IN THE AI ERA

As discussed above, educational alienation is historically inevitable and is caused to a large extent by human desire. In the AI era, people assign personal desires to technical tools and attempt to realize class mobility through the economic stratification function of advanced technology. This is the essence of educational alienation in the intelligent era.

A. AI as a Carrier of Human Desire

The development of AI reflects human efforts to break through cognitive boundaries. It also strengthens three forms of human subjectivity in modern society. First, as cognitive subjects, human beings seek rational mastery of the world, which in education appears as emphasis on knowledge transmission and learning efficiency. Second, as rights subjects, human beings stress institutional protection and universal participation, reflected in education as demands for fairness and legitimacy. Third, as desiring subjects, human beings pursue material reward and utilitarian goals, manifested in education as educational utilitarianism [20].

Under the dominance of desiring subjectivity, educational technology, which is originally instrumentally neutral, is redefined as a means for efficiency, competition, and economic return. Education is given the functional expectation of rapidly transforming the unknown into economic benefit, becoming the deep root of educational utilitarianism and technological worship. With the institutionalization of scientific rationality, this tendency further evolves into a belief in reason and technology, that is, theoretical reason begins to intervene in the domain of practical reason [21]. Yet worship of scientific rationality does not bridge human desire. It may instead amplify desire through technology [22]. In educational contexts, such technological worship easily obscures the status of human beings as emotional and value subjects. AI then changes

from a tool that promotes development into an alienating force that compresses subjectivity and obstructs comprehensive human development.

Ultimately, under the dominance of digital rationality and technological power, educational subjects may lose subjectivity and critical-reflective capacity and become one-dimensional people shaped by technological logic [23]. Although AI surpasses human capability at the rational level, in practice it excludes emotional and value dimensions. Education then serves the unlimited expansion of desire, and human pursuit of pure reason alienates human beings into tools for realizing desire.

B. AI as a Tool of Human Stratification

Human beings assign the possibility of realizing desire to AI, but AI's economic function also produces social stratification among human beings. AI stratifies people mainly through economic stratification and stratification of individual capacity.

Driven by national policy, AI is rapidly embedded in educational practice, and technological conditions are gradually becoming important indicators of school teaching quality. However, affected by economic foundations and regional development differences, unequal coverage of intelligent hardware and unequal opportunities for teacher training objectively intensify educational stratification. The 56th Statistical Report on Internet Development in China by the China Internet Network Information Center showed that, as of June 2025, urban Internet users accounted for 71.3 percent of total users, while rural users accounted for only 28.7 percent, indicating that the digital infrastructure gap remains obvious [24]. Studies have also found that although some rural schools in western China have basic multimedia equipment, a small number still use outdated devices such as DVD players and cable televisions, and information-based teaching equipment is insufficient to meet teaching needs [25]. This forms a real barrier at the level of hardware access.

At the same time, AI education requires relatively long schooling and capital investment, conditions that are difficult to guarantee fully in economically underdeveloped regions. AI education usually requires completion of high school or above, while surveys show that rural families with lower wealth and limited financing capacity invest relatively conservatively in human capital, and many rural adolescents stop at nine-year compulsory education [26]. At the teacher level, research based on China Education Panel Survey data found that teacher training improves teaching effectiveness overall, but its returns are significantly higher in cities than in rural areas. Its effect on rural students with lower academic achievement is limited, reflecting a structural gap caused by insufficient conversion efficiency of training resources [27].

In the process of pursuing knowledge completeness, AI may generate non-existent content and produce information hallucinations. Its intelligent recommendation mechanism can also create homogeneous information accumulation and produce information cocoons. This makes it difficult for teachers to surpass AI's enormous knowledge base and forces them to spend additional energy identifying the truth or falsity of information. Teachers' roles are thereby repositioned: they must both control AI and cultivate students' ability to control AI, resulting in new stratification in cognitive level and teaching capacity [28].

For students, the algorithmic black box requires strong information-discrimination and technology-management abilities. Educational digitalization depends on interaction between individual action and macro environments, and attention is a key process mechanism. In the information age, however, sustained attention has become a scarce resource [29]. Students also differ significantly in attention level, and some experience attention difficulties or deficits. The high-efficiency attention required by AI therefore objectively intensifies stratification in students' learning capacity.

In sum, advanced technology promotes human beings as cognitive, rights, and desiring subjects. Yet under the drive of desire, fascination with and worship of technology easily lead to technological loss of control and the overstepping of human subjectivity. The field of education must therefore guard against the intensification of educational alienation in the AI era, strengthen educational digital governance at the institutional level, and promote the high-quality development of educational digitalization.

V. PATHWAYS TO RESOLVING EDUCATIONAL ALIENATION IN THE AI ERA

In the AI era, educational transformation and innovation must be based on comprehensive, correct, and deep understanding of AI and of educational purpose. To prevent further educational alienation, it is necessary to clarify the utility and limits of AI in education, realize a harmonious coexistence of value rationality and instrumental rationality in educational purpose, and prevent educational alienation through modernized governance of the education system.

A. Recognizing the Utility and Limits of AI in Education

At the current critical stage of educational reform, the introduction of AI provides a real opportunity for educational transformation while also posing new challenges to educational subjectivity. The promotion of intelligent education must proceed on the premise of preventing educational alienation and clarifying the boundary between technology and human beings. AI should serve education as an auxiliary tool. Human subjectivity is a bottom line that cannot be crossed.

AI can only process given facts. Human beings, as the source of facts, continually generate themselves and the world through bodily experience, situational understanding, and meaning construction in concrete lifeworlds. In understanding the real world, making value judgments, and experiencing emotion, AI can never fully replace human

beings. The key to human-machine collaboration is therefore not replacing humans with machines, but humans guiding machines.

In concrete practice, teachers should assume the roles of guides and reflective agents, helping students use AI for information retrieval, learning diagnosis, and personalized support. Through classroom discussion and questioning, teachers should guide students to learn critically from AI-generated content and reflect on its hidden assumptions and limitations. In homework revision and reflection, a required structure of intelligent assistance plus human judgment should be established. Students should explain the reasonableness of AI suggestions and the basis of their own revisions, thereby strengthening subject participation and cognitive responsibility. Teachers should also increase contextualized teaching and real interaction to compensate for AI's structural deficiencies in emotional understanding, meaning generation, and intersubjectivity. Only when boundaries of human-machine division and collaboration are clear can AI become a technical force that promotes educational development rather than weakens subjectivity.

B. Returning to Educational Purpose: Balancing Value Rationality and Instrumental Rationality

The German sociologist Max Weber distinguished value rationality from instrumental rationality. Instrumental rationality refers to rational choice made by an actor who treats expectations about external conditions and others' behavior as means or conditions for achieving specific goals. Value rationality refers to an actor's conscious belief in the intrinsic value of an action itself, whether ethical, aesthetic, religious, or otherwise, and is oriented toward practicing that value rather than toward the success or failure of the outcome [30].

From a historical perspective, the history of educational development is to a large extent a history in which instrumental rationality gradually replaced value rationality. Education originally aimed to cultivate people with both cultural literacy and professional competence, so that professional knowledge could lay the foundation for development and cultural literacy could guide continuous self-improvement [31]. However, with the capitalization of education, the state and individuals have paid increasing attention to the economic returns of education, and educational instrumental rationality has gradually overwhelmed value rationality. In the AI era, education is more one-sidedly assigned instrumental expectations: optimizing teaching processes through technology, improving efficiency and quality, maximizing educational benefit, and serving social development and class mobility. Excessive pursuit of efficiency, however, often comes at the cost of human physical and mental development.

In reality, education as a tool of political and economic development has a certain inevitability, and the coexistence of value rationality and instrumental rationality is unavoidable. AI education should therefore not focus only on efficiency and methodological effectiveness. It should return to the essence of education, emphasize consistency between technological application and the goal of human development, mitigate the problem of excessive instrumental rationality, and promote interaction and balance between value rationality and instrumental rationality in modern education.

B. C. Modernizing Educational Institutions: From Basic Control to Modern Governance

The construction of contemporary education is no longer limited to technological equipment updates or repairs to existing institutions. It requires overall innovation and transformation at the institutional level. Current educational systems remain constrained by the basic-control logic of the industrial era, reflected in highly standardized curriculum structures, evaluation systems centered on scores and promotion rates, and rigid schooling arrangements. Although the state has continued to promote educational evaluation reform, examination scores and promotion rates remain dominant, while process-based and comprehensive-quality evaluations have difficulty functioning effectively.

Against the background of AI empowerment, innovation in educational institutions and organizational models lags behind. This not only limits the coordinated development of education and AI, but may also further solidify examination orientation through datafication and indicatorization, thereby intensifying educational alienation. Fundamentally, the institutional root of educational alienation in the intelligent era lies in the structural tension between the homogenizing and controllable goals pursued by basic control and the real demand for diverse learning paths and differentiated developmental rhythms.

Resolving this dilemma requires promoting a transition in educational governance from basic control to modern governance. On one hand, it is necessary to construct a pluralistic evaluation system, weaken score-only orientation, and strengthen process-based, value-added, and comprehensive evaluation, so that AI serves students' comprehensive development rather than teacher performance assessment. On the other hand, flexible credit systems and learning-process management mechanisms should be explored. With AI support, differentiated learning paths can be realized, and institutional inclusiveness and adaptability can be improved. At the national level, standards for AI-based educational management should be improved, norms for educational rights and obligations in the information age should be strengthened, and relevant laws and regulations should be developed.

VI. CONCLUSION

Against the background of educational alienation in the AI era, this article has examined how intelligent technology leads to educational alienation and even to human alienation. The analysis shows that educational alienation does not

originate in intelligent technology itself, but in the excessive expansion of technical rationality in educational practice and its concealment of educational aims centered on cultivating human beings. In the process of modernization, the application of AI to education is irreversible. Yet its direction should not be the dissolution of teacher and student subjectivity. It should serve comprehensive human development.

Intelligent educational reform must therefore be premised on the return of educational purpose. Educating people, rather than merely using people, should be established as the fundamental criterion for applying intelligent technology. In this sense, AI should be embedded in an educational governance framework guided by value rationality. Institutional design, evaluation-system reform, and professional judgment should limit the one-way domination of educational practice by technological logic.

The key to resolving educational alienation is not the rejection of technology, but the reshaping of the relationship between human beings and technology. AI should return to being an educational tool that promotes understanding, stimulates potential, and supports personalized growth. This process requires education systems to promote deep integration of AI and education and to construct, through multi-party collaboration, an intelligent educational ecosystem centered on schools, government, enterprises, and families. On this basis, a multilevel collaborative framework should be formed, covering individuals, organizations, institutional subjects, and market subjects, so that educational goals, technological application, and social demand can be dynamically coordinated. Only when intelligent technology truly serves human development can education resolve alienation risks in the intelligent era and achieve a deep transformation from technological innovation to value guidance.

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REFERENCES

[1] [1] CPC Central Committee and State Council, "Outline for Building China into a Leading Country in Education (2024-2035)," Jan. 19, 2025. [Online]. Available: https://www.gov.cn/zhengce/202501/content_6999913.htm

[2] [2] R. Huang, J. Liu, J. Pan, et al., "Systemic transformation of education for the intelligent era: Digital empowerment of comprehensive educational reform," E-Education Research, vol. 46, no. 4, pp. 5-12, 2025.

[3] [3] R. Wang, "Alienation: On this translated term," Dushu, no. 7, pp. 149-153, 2000.

[4] [4] D. Hu, Principles of Pedagogy, 3rd ed. Beijing: People's Education Press, 2013, p. 166.

[5] [5] X. Zhang, P. Mao, and S. Li, General History of the Chinese Imperial Examination System: Sui, Tang, and Five Dynasties, vol. 1. Shanghai: Shanghai People's Publishing House, 2015, p. 27.

[6] [6] Q. Chen, History of Chinese Education. Hefei: Anhui People's Publishing House, 2019, p. 510.

[7] [7] X. Yang, "Manifestations, causes, and governance of educational alienation in the intelligent era," China Educational Technology, no. 8, pp. 34-41, 2021.

[8] [8] Q. Zhang, The Credential Effect in China. Beijing: China Social Sciences Press, 2019, p. 9.

[9] [9] M. Spence, "Job market signaling," Quarterly Journal of Economics, vol. 87, no. 3, pp. 355-374, 1973.

[10] [10] T. W. Schultz, "Investment in human capital," American Economic Review, vol. 51, no. 1, pp. 1-17, 1961.

[11] [11] G. Yang, "On the historical content and contradictions of fairness in the imperial examination system," Journal of East China Normal University (Philosophy and Social Sciences), vol. 46, no. 4, pp. 1-20, 151, 2014.

[12] [12] Ministry of Education of the People's Republic of China, "Employment and entrepreneurship work for 2025 college graduates," Nov. 15, 2024. [Online]. Available: http://www.moe.gov.cn/

[13] [13] Y. Li and Q. Wang, "Urban-rural differences in higher education opportunities under enrollment expansion," Journal of Beijing Normal University (Social Sciences), no. 3, pp. 77-84, 2023.

[14] [14] I. Kant, Groundwork of the Metaphysics of Morals, L. Miao, trans. Shanghai: Shanghai People's Publishing House, 2012, pp. 22-23.

[15] [15] A. Badiou, Ethics: An Essay on the Understanding of Evil. London: Verso, 2002, pp. 120-136.

[16] [16] W. Li and L. Hu, "Ontological inquiry into schools in the intelligent era," Open Education Research, vol. 31, no. 1, pp. 4-14, 2025.

[17] [17] Q. Gao and W. Yan, "Knowledge revolution or educational alienation? ChatGPT and the future of education," Journal of Xinjiang Normal University (Philosophy and Social Sciences), vol. 44, no. 5, pp. 102-112, 2, 2023.

[18] [18] N. Dong, M. Chen, and F. Huang, "How can the identity of AI teachers be justified? An answer from emerging role theory," China Educational Technology, no. 5, pp. 42-52, 2025.

[19] [19] W. Yue and L. Yan, "Risks and avoidance of student subjectivity alienation in the intelligent era," China Educational Technology, no. 2, pp. 90-97, 2023.

[20] [20] M. Cheng, "The abstract domination of machines over the proletariat in the age of artificial intelligence: A subjectivity perspective based on historical materialism," Philosophical Trends, no. 4, pp. 34-43, 2022.

[21] [21] H. Marcuse, One-Dimensional Man: Studies in the Ideology of Advanced Industrial Society, J. Liu, trans. Shanghai: Shanghai Translation Publishing House, 2008, p. 126.

[22] [22] Y. N. Harari, Homo Deus: A Brief History of Tomorrow, J. Lin, trans. Beijing: CITIC Publishing Group, 2017, p. 160.

[23] [23] C. Zhang and H. Guo, "Mechanisms and essence of digital technology worship in the digital era," Journal of Chongqing University of Posts and Telecommunications (Social Science), vol. 35, no. 2, pp. 93-102, 2023.

[24] [24] China Internet Network Information Center, The 56th Statistical Report on Internet Development in China. Beijing: CNNIC, 2025, p. 1.

[25] [25] N. Zhang, Y. Luo, R. Xiong, et al., "Research on educational informatization promoting rural teacher development: A large-scale survey in western Province X," Chinese Journal of Distance Education, vol. 43, no. 3, pp. 55-63, 2023.

[26] [26] J. Li and C. Liu, "Education reform, artificial intelligence, and rural youth employment," Economic Perspectives, no. 3, pp. 112-128, 2024.

[27] [27] R. Sun and P. Du, "Can teacher training narrow the urban-rural academic gap? Empirical evidence from CEPS baseline data," Education and Economy, vol. 37, no. 2, pp. 47-57, 2021.

[28] [28] S. Guo, "Educational digitalization enabling new curriculum implementation and teacher-training transformation," China Educational Technology, no. 7, pp. 51-60, 2023.

[29] [29] Y. Liu and S. Fang, "Attention governance in educational digital transformation: Mechanisms, risks, and responses," China Educational Technology, no. 12, pp. 31-38, 47, 2024.

[30] [30] M. Weber, Economy and Society, K. Yan, trans. Beijing: Commercial Press, 1998, pp. 56-57.
[31] [31] A. N. Whitehead, The Aims of Education, X. Xu, trans. Changsha: Hunan People's Publishing House, 2023, p. 2.