Proceedings of ICEIPI 2026 Symposium: Inclusive Education, Cultural Transformation, and the Ethical Dimensions of Learning
DOI: 10.54254/2753-7048/2026.LD33078

Empowerment and Guidance: Educational Implications and Implementation Paths of Students' Leisure Time in the Intelligent Era

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Abstract. This study is based on the "leisure", an undeniable educational field at present. It reinterprets students' time allocation against the background of greatly improved knowledge transmission efficiency, reveals its potential risks, and differentiates the essential differences between "leisure time" and "free time" as well as the connotation of leisure education. Furthermore, combined with the "time paradox" caused by intelligent technology, it explains the value of leisure from two dimensions: the perfection of individual mind and the construction of group "resonance circle". Taking this as an opportunity, it puts forward the new identities of teachers for the intelligent era, namely "designer of leisure time and space", "guide of meaning negotiation" and "empowerer of community", and constructs a specific action framework to provide a possible path for teachers to meet the challenges of the times. The value lies in clarifying the time dimension of educational reform in the intelligent era, providing a basis and path for the implementation of policies such as "five-in-one education", and playing a positive guiding role in promoting the all-round development of students' personality.

Keywords: leisure time, artificial intelligence, educational value, implementation paths

1. Introduction

With the rapid development of AI technology, all aspects of the education field are changing accordingly. Various intelligent tools are applied in teaching, which has greatly improved the efficiency of knowledge transmission and increased the free time that students can arrange by themselves. However, this extra free time has not automatically become a favorable environment for students' growth. The excessive pursuit of efficiency has intensified involution, algorithmic push has fragmented free time into scattered entertainment segments, and the unclear boundary between humans and intelligent tools has weakened the deep emotional connection between teachers and students as well as among peers. This is the "time paradox" in the intelligent era: technology can free up free time for students, but in practice, there is a risk of misuse of this time.

The core issue related to the goal of education is how to guide students to arrange the time "freed up" by technology. Both Chinese and Western educational traditions emphasize that leisure plays a fundamental role in personality perfection: creativity is gradually cultivated in "slow thinking",

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DOI: 10.54254/2753-7048/2026.LD33078

critical thinking is polished through "in-depth reading", and values are established in real social interactions.

This paper first clarifies the essential differences between "leisure time" and "free time", then analyzes the two impacts of technology—promoting the emergence of leisure and causing the alienation of leisure, further identifies the educational significance therein, and focuses on formulating a specific action framework around the transformation of teachers' roles, so as to provide theoretical basis and practical path references for students' leisure education in the intelligent era.

2. Concept definition: what is "students' leisure time"

Clarifying the unique connotation of "students' leisure time" is the logical foundation of this study, which requires transforming daily expressions into standardized pedagogical concepts.

2.1. Analysis of conceptual essence

The term "free time" is neutral in attribute. Quantified free time refers to the remaining time that students can freely dispose of after completing school tasks and some daily affairs. The random utilization of free time may be developed and utilized, or may pass away in aimless consumption.

The inherent value norms of "leisure time" in its original sense can be discussed from two aspects. Firstly, from the etymological dimension, the ancient Greek word "schole" specifically refers to leisure, and Aristotle believed that leisure is the highest origin of all actions, which enables philosophical contemplation to exist and develop, and gives birth to artistic and poetic creation. For human development, leisure is more conducive to the perfection and development of human beings. Therefore, free time has the intrinsic value and characteristics of educational intention. As for the Chinese educational tradition, "Confucius said, 'Aim at the Way, base on virtue, rely on benevolence, and play in the arts'." The word "play" in this passage emphasizes calmness and pleasure, which is an inner freedom obtained in the practice of skills such as rites, music, poetry and books, and a leisure state containing educational implications. Taoism advocates a life rhythm beyond utilitarian constraints through "freedom" and "inaction", and comprehends the ultimate truth in nature and contemplation. These ideas jointly show that true leisure is never idleness, but directed freedom and grounded relaxation.

Thus, "students' leisure time" refers to the expression of life-conscious leisure, which is a practical activity carried out based on time empowerment, space empowerment and mind meaning-giving. The definition of "students' leisure time" in the context of the intelligent era has expanded the vision of intellectual education [1].

In a sense, leisure is by no means a vacuum of education, but a blank space of education, and an indispensable "photosynthesis field" in students' life growth. True leisure education is not to guide individuals to indulge in trivial pleasures and live passively in their free time, but to guide individuals to explore interests independently, develop individual potential, cultivate aesthetic taste, learn self-adjustment, establish social connections and comprehend the meaning of life, which is highly consistent with the core value of students' leisure time.

2.2. Educational characteristics of student groups

The leisure time of student groups has distinct educational characteristics, and these characteristics present a progressive internal logic. Firstly, it is a time-space carrier independently controlled by

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students. Leisure period is a learning period that students get rid of external mandatory learning activities and fully control by themselves. For students, this is an autonomous field where they can break free from constraints and develop freely, and develop individual traits freely according to their own interests, hobbies and potentials. On this basis, leisure time can give birth to an internally driven pleasant experience. Free from external compulsory promotion and pressure, the natural reward after solving a difficult problem or completing a creation is a sense of accomplishment. This pleasant internal motivation will continuously drive individuals to explore forward. This pleasant internal motivation further promotes leisure to become a linkage bond of integrating knowledge with practice. It forms an organic linkage with classroom teaching, providing students with opportunities to test, integrate and sublimate book knowledge and skills in real situations, and truly realize the dialectical unity of "knowledge" and "practice". Finally, leisure time constitutes an irreplaceable growth link for students. Classroom teaching mostly imparts standardized and structured common knowledge, focusing on cultivating students' basic cognitive abilities, while leisure time fills the gap of personalized growth and comprehensive literacy cultivation, becoming an indispensable key part of students' complete life growth.

In promoting the realization of educational goals, having leisure time for independent exploration can provide students with an inexhaustible driving force for continuous learning. It can also cultivate interests and hobbies, improve communication skills, enhance emotional management ability, etc., which are essential for learning and living in the intelligent era.

3. Contemporary context: generation and alienation of leisure time in the intelligent era

The introduction of artificial intelligence into classroom teaching is bound to "squeeze" part of the time in the teaching process, thus increasing students' free disposal time compared with the past. At the same time, it may also form a "time paradox" effect, that is, the emergence of leisure time may be accompanied by the alienation of leisure time.

3.1. Technological generation of leisure time

Technological empowerment has reconstructed the time structure of education. With the application of personalized learning systems, the development of automatic correction tools and ubiquitous knowledge acquisition channels, the "necessary class hours" for "standard content" are continuously compressed, and more and more leisure time can be freed up for students. Intelligent technology represented by generative artificial intelligence, through large-scale data training and deep learning algorithms, can complete the most tedious knowledge teaching, homework correction and other tasks in conventional teaching in just a few seconds, freeing teachers from repetitive mechanical labor and freeing up valuable time for students' leisure time [2].

This trend can be seen from practical data. According to a sampling survey by China Youth Daily · China Youth School Media in November 2024, 84.88% of college students in China have used AI tools at present. Among the AI applications used, the top six are data query, translation, writing content generation, problem-solving calculation, tabulation and drawing, audio and video editing and PPT production, among which applications directly related to learning account for 61.30%, ranking second. 77.51% of people believe that artificial intelligence can be used to complete tedious tasks such as data integration and manuscript writing to improve work and learning efficiency. In other words, people are increasingly entrusting such tasks to technology, giving birth to emerging platforms characterized by "homework substitution", thus freeing up a lot of time and space

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originally occupied by inefficient tasks, providing a realistic basis and institutional possibility for leisure education [3].

3.2. Multiple alienations of leisure time

3.2.1. Involution devoured by the efficiency paradox

Under the influence of the efficiency paradox, the phenomenon of involution in the education field has intensified. The time gaps saved by technology are often filled with more intensive academic tasks. The evaluation system dominated by unified data models and algorithms often ignores individual differences, giving birth to homogeneous and high-intensity training tasks, leading to an increase rather than a decrease in students' burden [4].

From a macro perspective, educational reform must attach importance to the principles of inclusiveness and fairness. However, in the "efficiency paradox", we can find that the essence of current involution is the intensification of educational unfairness. The time saved by technology does not provide students with leisure time and space for independent development, but instead intensifies this unfairness invisibly, which is the harm of leisure time alienation [5].

3.2.2. Relational alienation caused by technological mediation

Relational alienation caused by technological mediation has greatly weakened the functional role of teachers. When generative AI is improperly used, its instrumental rationality will crowd out the emotional and creative interaction space between teachers and students. Human-machine collaboration means achieving goals with the help of intelligent systems, not using intelligent systems for the sake of using them. Very complex processes are simplified, which damages the learning experience and affects the quality of leisure [6]. From the perspective of human-machine collaboration, the core competence in the intelligent era is "human-machine collaboration" rather than "human-machine replacement". If students rely too much on AI to obtain answers, it will not only weaken the emotional connection between teachers and students, but also lose the opportunity to collaborate and communicate with others, hinder the development of human-machine collaboration ability, and run counter to the talent training goals of the intelligent era.

3.2.3. Attention problems in digital consumption

There are attention problems in digital consumption. Almost all entertainment applications in mobile app stores are algorithm-driven today. Due to their highly addictive design, the original whole leisure time is fragmented into passive and fragmented "user duration", and entertainment demand has become an important leader in resource allocation. According to the data of the 6th Survey Report on Internet Use by Minors in China, the Internet penetration rate of minors in China has reached 97.3%, among which 20.2% of minors have Internet dependence. A large number of minors are addicted to various entertainment applications in mobile phones, and algorithm-driven entertainment is devouring a lot of free time of minors [7]. This alienation of attention is essentially the destruction of "educational blank space" in the era of digital consumption. When students' leisure time is occupied by fragmented entertainment, they lose the opportunity to explore independently and think deeply, cannot realize the "expression of life-conscious leisure", and seriously deviate from the original intention of leisure education.

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4. Value interpretation: educational implications and practical value of leisure time

Leisure time has irreplaceable educational value for students' development. It helps students break free from the constraints of instrumental rationality, cultivate their complete personality, and is also an important medium for constructing a group "resonance circle".

4.1. Core support for individual growth

4.1.1. A cradle for cultivating creativity

Gunter B G believes that leisure activities of individuals in leisure time can make them fully immersed in a high-investment sense of self-sufficiency. In particular, positive and healthy sports leisure activities are conducive to the cultivation of creativity and exploration [8]. Free leisure time can reserve "slow time" for the innovation process that requires long-term gestation and repeated trial and error, which is an important carrier to stimulate creativity and can be cultivated in the process of leisure education.

Knowledge is constantly generated and accumulated, but it requires continuous independent exploration by human beings to exert creativity. The slow thinking given by leisure time cannot be provided by artificial intelligence, and its role in cultivating innovative talents is irreplaceable.

4.1.2. A training ground for critical thinking

If classic works are the material library of critical thinking, then the process of reading classic texts is a training ground for critical thinking. Both in-depth reading and speculative dialogue are a process of slow thinking, enabling children to break away from standard answers, achieve "independent and mature" thinking, and thus temper critical thinking.

In the intelligent era, in addition to focusing on logic and efficiency, it is also necessary to coordinate technology with human values. Learn critical thinking to distinguish truth from falsehood in massive information, and spend leisure time on speculative dialogue and in-depth reading.

4.1.3. A nurturing soil for non-cognitive literacy

In participating in various activities such as sports, art and getting close to nature, students' aesthetic sensitivity, emotional regulation ability and other literacy will be cultivated invisibly. These literacy related to inner happiness are the core dimensions of constructing a "complete person" in the intelligent era. Their growth often cannot be accelerated through deliberate design, but needs to be quietly nurtured in the relaxed and natural environment provided by leisure, which is the best soil to support individuals' lifelong development and happy life [9].

4.2. Construction of group value of "resonance circle"

4.2.1. Core connotation of "resonance circle"

The core connotation of "resonance circle" mainly refers to a learning community spontaneously formed by students after class based on common interests and similar emotional beats through continuous in-depth interaction, with emotional resonance as the core, knowledge co-creation as the content and value sharing as the goal.

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4.2.2. Value confirmation of practical cases

For example, the "Journey of All Things Circulation" of Shenzhen Xingzhi Primary School, through this environmental education curriculum, students go out of campus to nearby recycling stations, and then use waste to design new recycled artworks. Another example is the "Science + Labor" vegetable plot labor practice carried out by Loudi No.3 Primary School. Through a series of activities such as sowing and yield measurement, students verify the relevant scientific laws in books, and realize the profound practice of "applying what they have learned" when improving barren soil later [10]. Such practices integrate interdisciplinary knowledge and collaborative activities in real situations, and promote students to transform book knowledge into comprehensive literacy. The "resonance circle" not only serves as a learning carrier, but also becomes an emotional and value bond that unites the group and promotes the coordinated development of individuals and the collective.

4.2.3. Practical path of five-in-one education

Through this practical research, it is found that project-based practices such as leisure education can break through the shackles of the boundary of "classroom", transform knowledge into literacy, and are a good way to implement "five-in-one education". It also conforms to the ongoing scenario-driven education reform trend, that is, carrying out educational activities with the help of communities, nature and other fields, breaking disciplinary and spatial barriers, and integrating the teaching and learning of moral, intellectual, physical, aesthetic and labor education in open and flexible real situations.

5. Practical path: teacher role reconstruction and action framework

The value of students' leisure time is becoming more and more prominent. However, under the background of the deep integration of intelligent technology into the educational ecology, the implementation of leisure education requires not only institutional design and technical support, but also joint efforts of all parties. From the perspective of teachers, role transformation is needed. Traditionally, we regard teachers as knowledge transmitters and truth seekers. In the context of the era of students' independent development and meaning construction, the new identity of teachers should become an empowerer, namely a supporter, a server, a collaborator, etc. Against the background of the "Double Reduction" policy and the advent of the artificial intelligence era, students have more free time at their disposal. These times are no longer "blanks" in growth, but should become the "photosynthesis field" for the natural growth of life. The transformation of teachers' roles is imperative.

5.1. Logic of teacher role reconstruction

5.1.1. Flexible role switching under the "four-quadrant" model

In the intelligent era, the main theme of teachers' roles is still "empowerer and collaborator of students' development", but teachers are not just a specific role in the interactive subject, but switch their role positioning according to different situations, educational requirements and student characteristics. This paper conducts a multi-dimensional investigation and analysis on the transformation of teachers' roles in the intelligent era from two dimensions of "execution-reflection" and "routine-innovation", and constructs a four-quadrant model.

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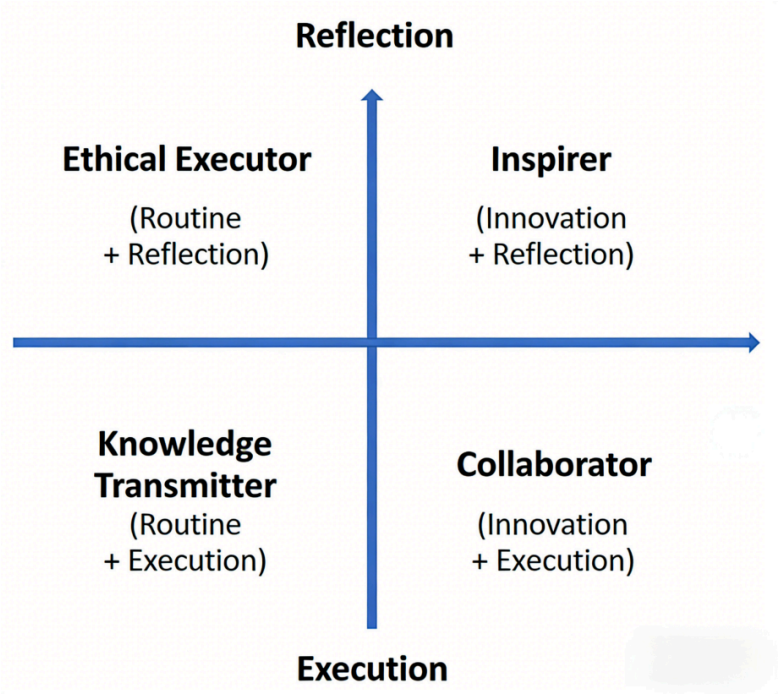


Figure 1. Four-quadrant model of teacher roles

Firstly, knowledge transmitter (routine + execution), which refers to the role of efficiently transmitting basic knowledge to others. Teachers need to organize learning content into a system and ensure that students master core knowledge.

Secondly, ethical executor (routine + reflection). When it comes to value guidance, behavioral norms and ethical judgment, teachers need to base themselves on the essence of education, guide students to distinguish right from wrong, and stick to the bottom line of education.

Thirdly, collaborator (innovation + execution). When facing real problems, interdisciplinary practices, technology integration and other tasks, teachers are not "mentors" for students' learning, but participate as "learning partners" for students to explore and collaboratively solve problems, so as to realize the transformation from knowledge to literacy.

Fourthly, inspirer (innovation + reflection). Facing open situations and complex challenges, teachers can stimulate students' higher-order thinking and creative insights through questioning, dialogue and reflective activities.

The above four roles are not isolated from each other, but constitute a "role toolbox" that teachers can flexibly use in complex educational scenarios.

The "four-quadrant" model requires teachers to be good at flexibly switching from "guide", "executor" and "inspirer" to "collaborator". When completing efficiency-oriented skill training in leisure time, they play the role of "executor". When guiding students through ethical dilemmas or carrying out innovative activities such as project-based learning, they switch to the two dimensions of "reflection" and "innovation", and exert multiple identities of "inspirer" or "collaborator". Such flexible switching not only responds to the requirements of the intelligent era for teachers' composite abilities, but also makes teachers truly become guides and growth partners in students' leisure learning [11].

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5.1.2. Closed-loop path of role evolution

Furthermore, the transformation of teachers' roles should form a closed-loop path of continuous evolution and gradual deepening, that is, from the initial collaborative execution (directly participating in learning activities as a collaborator) to a higher level of collaborative governance (becoming an inspirer and ethical guide, systematically empowering students' independent planning and value judgment), and finally building a benign empowerment cycle of interconnection and mutual promotion among students, teachers, intelligent agents and the environment.

5.2. Specific implementation paths

5.2.1. Designer of leisure time and space

Teachers' role is no longer simply arranging students' time, but more to become creators of educational time and space. In leisure periods such as holidays with relatively flexible time, high emptiness and independent disposal, teachers can guide students' growth community, take the main body of "Hometown River Ecological Map", design and implement such interdisciplinary long-cycle projects. Take the initiative to enter the real society and nature in leisure time, carry out water quality index measurement and interviews, write and form comprehensive reports and other activities. These real activities requiring cooperation and exploration have improved students' key abilities such as research, collaboration and real problem-solving. Teachers can also focus on utilizing space as an educational element to construct rich learning scenarios for students, and can establish online collaboration platforms to allow students to participate in online collaborative exploration beyond time and space restrictions. Introduce intelligent tools to help students build digital support systems integrating community venue resources and various expert information, and guide students' planning and choices in leisure education activities.

5.2.2. Guide of meaning negotiation

Under the background of convenient and extensive application of artificial intelligence, teachers need to change from a bystander of technology application to an active promoter, namely a "value booster", taking artificial intelligence as their capable assistant [12]. On the one hand, teachers can continuously promote the dialogue to a deeper level through Socratic questioning. On the other hand, organize special debate activities around topics related to artificial intelligence ethics, such as value analysis on issues such as the bottom line of technological ethics, technological boundaries, data privacy and security. In addition, relevant practical ethical tasks can be assigned, such as analyzing and discussing the copyright issues of artificial intelligence-generated content through case simulation or observation, so as to continuously strengthen ethical cognition and values in practical activities and build a robust value judgment framework.

5.2.3. Empowerer of community

As a key constructor and empowerer of learning community, teachers' primary task is to create an interactive atmosphere for the community with psychological safety, allowing multiple expressions and trial and error, and capture the germination of students' interests and connect them with experts, books and laboratories. Furthermore, teachers must provide necessary methodological support for learners, such as demonstrating research design, project process management, etc. On this basis, teachers need to transform into knowledge system architects and dynamic supervisors, take the

DOI: 10.54254/2753-7048/2026.LD33078

initiative to build a collaboration mechanism between family, school and society, link parents to carry out family leisure activities, strive for communities to provide practice venues, form a joint educational force, and provide systematic support for the continuous generation and development of learning resonance circles [13].

6. Conclusion

Facing the objective reality that the educational ecology is reshaped by artificial intelligence, we should not let the efficiency dividend only simply increase learning intensity, nor should we be satisfied with fragmented entertainment. Under the guidance of the "people-oriented" spirit, leisure time is taking shape. This requires educators to be good at using intelligent technology to help us share the repetitive and tedious mechanical education and teaching work, free up educational blank space, and actively guide students to use the leisure provided by technology to nourish creativity, temper critical thinking, and construct social connections between people, so as to provide a new growth soil for the cultivation of students' complete personality.

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