Analysis of the Social Function and Value Realization of Art in the New Era

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Abstract

With the continuous enrichment of material life and the increasing improvement of spiritual life, the quality of life of people in the new era has improved comprehensively. After achieving technological advancements, further improving people's living standards will become the first priority, and indicators concerning quality of life will become more important, including spiritual needs, environmental conditions and social order. In particular, the degree of spiritual and cultural satisfaction is a prominent indicator for consideration. The current research investigates how new-age art is changing and how it may affect society dynamics in the future. It explores how new-age art, as a phenomenon in culture, adjusts to shifting environments, emphasizing the social roles, realization of values, and influencing elements of the art. With a focus on spiritual and cultural fulfillment, the study highlights the value of art in improving people's quality of life while taking into account elements such as social order, environmental influences, and spiritual demands. The primary goal is to comprehend the ways in which new age art raises living standards and general well-being. The results demonstrate the lasting contributions that new-age art makes to enjoyment, cultural transmission, and education, thereby reaffirming its important position in society. The paper emphasizes how crucial the socialist culture sector with Chinese characteristics will become to the future economic framework. This study found that new-age art continuously produces excellent literary and artistic works in addition to preserving traditional Chinese culture and fostering cultural self-confidence through its support for the improvement of living standards and industrial growth. This illustrates its practical importance in upholding economic supremacy and promoting cultural advancement.

Keywords New era art · Social function · Value realization · Art in the new era · Sociology

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1 Introduction

A story that sheds light on China's artistic journey is buried deep beneath the country's historical past. A master painter, renowned for his unmatched brushstrokes, once taught his young student a timeless lesson beneath the warm glow of red lanterns. "Art is the heartbeat of our cultural spirit," he declared. It is more than just a representation of what we see. This age-old knowledge emphasizes how art in China has always been valued as more than just aesthetics; it is a national treasure that represents the spirit of the country. As China advances in building a contemporary communist society, this ancient knowledge gains fresh significance. The significant shift in society has presented new difficulties. And chances, especially in promoting communist principles with Chinese characteristics. The cultural industry is positioned to play an increasingly important role in the political, economic, and social domains at this critical juncture, enhanced by its rich historical background and moral resonance.

China's cultural heritage, which is ingrained in its art, is at the cusp of a new era as a means of civic education. It acts as a link between the wisdom of the past and the goals of the present. Most sublime works of art, grounded in morality and effort, become tools of enlightenment in classrooms and beyond. They do more than just paint walls; they shape pupils' minds, encouraging healthy, scientific ideas, values, and cultural self-confidence. More than just a curriculum improvement, this incorporation of art into civic education is a reflection of China's continued efforts to instil basic socialist values in the country's children. Encouraging the best of Chinese art and culture calls for a societal commitment to cultural education and heritage preservation, as well as national pride and cultural confidence vibrating with the vitality of traditional Chinese painting as taught by the great masters.

Therefore, we are looking at more than simply a program or policy when we investigate the crucial role that art will play in influencing civic education in China in the future. We are rediscovering a journey that began under those red lights centuries ago and that now serves as a source of inspiration and guidance for a country as it forges ahead.

Imagine a classroom where students interact not only with textbooks but also with the living, breathing culture, where the timeless tales of ancient scrolls meet the rich culture of modern China. Here, the natural blending of civic science and art produces a rich environment that fosters the development of great artistic forms. This is a concept that goes beyond academic education, seeking to establish a peaceful social and cultural environment.

2 Related Works

At present, research on the social function of excellent art works as a theme in domestic academia is relatively limited (Bosco et al., 2019). However, among the existing studies, many scholars have conducted research from the perspective of school-based art culture as the content of moral teaching, and there are also many scholars who have taken Chinese excellent art culture as the theme of research, and the research results indirectly related to the excavation of the moral education value of excellent art works are not few (Puzhayev, 2020). The theoretical basis of this study was obtained by analysing the relevant literature and summarizing it (Gong et al., 2021).

Since the beginning of the new curriculum reform, many scholars have begun to explore the school-based research and development of Chinese art culture, and many excellent research results have been produced. In the literature related to this study, the views of different scholars are somewhat differentiated: the view of some scholars is that the quintessential part of Chinese art culture has certain ideological and moral education functions, moral education has the same basic function, and the two are at an intersection in this regard (Pavesi et al., 2019). The study (Jin & Yang, 2021) analysed the connotation of excellent Chinese art culture in depth and found that it contains great ideological and moral education value in itself. Based on previous studies, research (Chen & Sharma, 2021) proposed that Chinese art culture has a high degree of overlap with moral education in terms of value and role, so it can be mapped out to provide feasibility for moral education based on the carrier of excellent art culture, and they affirmed that Chinese excellent art culture has the moral education efficacy of shaping and cultivating people. Research (Niu, 2021) integrates various research materials and understands that scholars mainly focus on two aspects when conducting research on excellent art culture and moral education: first, studying the relationship between the two from the theoretical level; second, specifically analysing the relationship between excellent art culture and moral education from the perspective of practice. When exploring the relationship between excellent art culture and moral education, most scholars focus on the two issues of the connotation of China's excellent art culture and the relationship between excellent art culture and moral education (Zhang, 2017). When exploring excellent art culture and moral education from a practical perspective, scholars tend to explore the organic way of combining excellent art culture and moral teaching activities and focus on the feasible path of how the social function of excellent art culture can be realized (Yang & Zhu, 2020).

According to the research results of existing scholars, the following three paths are more authoritative: when using art culture as moral education teaching content, a certain critical attitude should be adopted to analyse art culture in depth, the essence part should be inherited and carried forward, and the insufficient part should be made more adaptable through modernization and innovation to achieve better protection. Research (Lou, 2019) organically integrates art and culture with educational activities, which is an effective way to spread art and culture. Research (Eren & Yılmaz, 2020) uses art culture as moral teaching content through school-based research and development in the existing Civic and Political Science teaching content system, which can give a certain practicality to enhance the teaching effect.

However, scholars' research in this area also has certain shortcomings; for example, most of the scholars' research is mainly focused on exploring the integration path of art culture and civic and political science teaching courses, both in depth and breadth, and few scholars have analysed the function of art culture in moral education (Eren & Yılmaz, 2020; Qiao et al., 2021). In this study, this paper takes some excellent artistic fine plays as an example and, on the basis of analysing their social functions, determines the path of organic integration of the two, hoping that through this study, we can realize the effective protection and inheritance of artistic culture.

Research (Xue, 2017) studied moral education teaching activities in depth based on the research results, and they believe that through moral education, the ideological and moral level of individuals can be improved, thus promoting the overall social ideological and moral construction. Research (Xu & Li, 2017) defined art culture as an art form formed after the accumulation of many kinds of excellent art and cultural resources, which contains the philosophical thoughts of the ancients and is rich in Chinese characteristics

and can form a wide range of influence and promote social harmony, thus, reinforcing that art culture significantly affects moral education.

In this study, based on the above, we try to dig deeper into the social functions of excellent art works, which is also the innovative point and feature of this paper. In this paper, we have reviewed a large number of existing research results abroad both online and offline, and the results show that foreign civic education is generally called moral education.

Marx believed that the educational value of literature is mainly reflected in cognitive aspects and emphasized it in his article (Dannemiller, 2019). Engels had the same view and proposed that literary works can be used as historical materials with great research value (Ji & Lin, 2022). Lenin stated that revolutionary literary works have the value of guiding people and can inspire them (Haishan, 2018). Comenius proposed that literary works contain many philosophical ideas in themselves, which can nourish human character and have great educational value (Li, 2021). On the other hand, it has been proposed that education that is psychologically acceptable to students is good education (Zhou et al., 2022). The famous American scholar Gomez's view is that classic literary works should be included in the curriculum of schools to enrich the teaching system (Ling, 2020). In the previous article, scholars have different views on the educational value of literary and artistic works, but they are unanimous in this aspect in that literary and artistic works have educational functions, so by developing and utilizing literary and artistic works, we can maximize their permeability function, a summary description of the advantages and disadvantages of different solutions is shown in Table 1.

3 Methods

New Age art is influenced and constrained by the socio-political and economic system, culture, population and level of economic development; however, New Age art has a counter-effect on society. On the one hand, the social functions of New Age art are mainly reflected in the role played by New Age art in economic development, the influence of New Age art on social civilization, the interaction between New Age art and human relations and the development of New Age art for a harmonious society. As far as the social dimension is concerned, the role of New Age art in the overall composition of human civilization and in the direction of human development with the overall goal of "achieving a better life for mankind" cannot be replaced by agricultural, industrial, commercial and industrial, religious, scientific and other activities. On the other hand, new-age art has the function of moral education, and new-age art also has the function of intellectual education.

3.1 Analysis of the Social Function of New-Age Art

3.1.1 Entertainment Function

The entertainment function of New Age art is regarded as the primary function of New Age art. The reason for this is that at the early stage of the formation of New Age art, it gradually evolved from people's ritual songs and dances, and people expressed their reverence for the gods by singing and dancing in the rituals, conveying the popular ideal concept that people at the bottom were eager to have good weather and rain and infiltrating people's psychological cognitive characteristics of respecting the laws of nature, which

Table 1 Side-by-side comparison in terms of findings and methodologies might offer readers a clearer picture of where your research fits in the broader academic landscape

Ref	Focus area	Key findings/themes	Methodologies used
Bosco et al. (2019)	Social value of arts	Social return on investment in arts for care home residents	SROI analysis
Puzhayev (2020)	Legal socialism in French thought	Historical analysis of legal socialism	Historical review, legal analysis
Gong et al. (2021)	Corporate social responsibility	CSR in the context of a low-carbon economy	Radial basis function neural network evaluation
Pavesi et al. (2019)	Social innovation in built environment	Role of social managers in social innovation	Case studies, theoretical analysis
Jin and Yang (2021)	CAD in environmental art design	Effectiveness of CAD software in teaching	Practical application, software analysis
Chen and Sharma (2021)	3D virtual simulation in art design	Construction of art design system with 3D simulation	System design analysis
Niu (2021)	CAD in environmental art education	Communicative image expression in teaching	Educational outcome assessment
Zhang (2017)	CAD and environmental art design paradigm	Influence of CAD on design paradigms	Literature review, theoretical exploration
Yang and Zhu (2020)	Environmental vs. environmental art design	A Chinese perspective on environmental design	Comparative analysis
Lou (2019)	Idea of environmental design	Revisiting environmental design concepts	Theoretical exploration, literature review
Eren and Yılmaz (2020)	Digital vs. conventional drawing in education	Student attitudes towards different drawing methods	Surveys, academic achievement analysis
Qiao et al. (2021)	Environmental design teaching model	Teaching model based on ecological sustainability	Educational model evaluation
Xue (2017)	Environmental art design and virtual tech	Expression of environmental art design with virtual tech	Practical application, technology analysis
Xu and Li (2017)	CAD in environmental art (3D studio max)	Use of 3D Studio Max in art design	Software analysis, practical application
Eren and Düzenli et al. (2018)	Design approaches in environmental design	Student attitudes towards biometric and parametric design	Surveys, educational outcome analysis
Dannemiller (2019)	Engineering design for environmental health	New course in interdisciplinary challenges	Course development analysis
Ji and Lin (2022)	Aesthetics of sustainability	Design strategies for emotionally durable design	Theoretical exploration, strategy analysis
Haishan (2018)	Teaching decorative painting	Focus on visual communication design teaching	Educational practices analysis
Li (2021)	Visual communication in digital media	Digital media's role in visual communication	Case studies, practical application
Zhou et al. (2022)	Digital media tech in visual design	Innovation in visual design using digital media	Technological innovation assessment
Ling (2020)	Big data in visual communication design	Combining big data with visual design practice	Case study, technology application analysis

were expressed in the early New Age art. When people began to focus on the dynamism of the "human" social subject, the entertainment function of New Age art began to shift from "entertaining the gods" to "entertaining the people", coupled with the fact that in the field of art, the popularity of such concepts as "labour is the source of art and its development," increased and the new age art began to integrate many elements of life and gradually formed a certain set in form, rhythm, tone, and program, and people began to get more pleasure from the new age art. With the emergence of various art consumption styles in the art field, the living space of New Age art was compressed to a certain extent, and various fast-food art styles and cultural contents were more favoured by the younger population who were under great pressure in life. However, the entertainment function of the new-age art has never been eliminated, and its artistic expression form of "singing, reciting, playing" has, on the contrary, attracted new-era art fans by virtue of its strong artistic heritage. The phenomenon of various new-era art folk art activities and "Beijing new-era art in the school" at this stage is the embodiment of the new-age art with strong artistic characteristics and entertainment function.

3.1.2 Edification Function

The edification function of new-age art is based on its entertainment function, which is often said to be teaching and entertaining. This unique expression form of attaching the edification function to the entertainment function has also become one of the unique artistic charms of new-age art. In terms of the edification function of new-age art, its social benefits vary, from new-era art works that promote positive values and outlook on life to new-era art works with certain feudal characteristics and lower artistic functions. This phenomenon of mixed indoctrination is mainly due to the different political demands of the ruling class at the top of society at different times.

After the establishment of New China, China's cultural department reformed some old new era arts that exuded a strong feudal atmosphere by summarizing, adapting and processing the traditional repertoire, thus making the edification function undertaken by the new era art more positive. A group of artists with strong artistic creation needs and abilities were cultivated, thus making the edification value of New Age art more positive and realizing the effective convergence of the entertainment function and edification function of New Age art.

3.1.3 Cultural Inheritance Function

The cultural inheritance function ranks after the entertainment and edification functions in the functional attributes of new age art, but under the new situation, the cultural inheritance function of new age art has jumped to the primary function, and whether its cultural inheritance function can be effectively inherited and carried forward also in turn restricts and influences the entertainment and edification functions of new age art. The cultural inheritance function of new-age art originates from its long development history, in which various classic folk stories and social contents were used as the content of new-age art performances, and the artistic beauty and even edification of its performance program is also dependent on the strong national cultural attributes of new-age art. It is the embodiment of the cultural inheritance function of the new era art. After entering the new century, China's cultural management department has paid increasing attention to the value and function of

New Age arts and declared them as intangible cultural heritage, thus making New Age arts closely connected with Chinese culture.

3.1.4 Cultivating Artistic Talent

New Age art promotes multiple intelligences through form and process, i.e., through infinitely colourful forms of artistic expression and the process of artistic activity of observation, intuition, imagination, expression, and communication of art. Of particular importance is the need for New Age art to focus on cultivating students' ability to understand art. The creation of art is a highly personal field, so learners learn to constantly and deeply understand how to think about and evaluate art as they experience different artists and different works of art and different methods of expression. At the same time, their own understanding of art continues to deepen as they explore and create, connecting their own lives and the things around them, thus forming their own view of artistic values and artistic understanding. In this process of learning and improving, artists can develop their knowledge and learn to progress through new age art groups and teams, design and book exhibition observation activities, and realize the exchange of ideas and new era art of works with experts, teachers and classmates in the skills and understanding of art.

3.1.5 Scientific Research on Art Development Laws

As an independent art discipline, new-age art has different research contents and service objects from traditional art disciplines, while new-age art also involves economic, cultural, technological, social customs, market demand and many other factors, so it is said that new-age art is a very comprehensive discipline that also requires the aesthetic standards of art to be comprehensive and change with changes in the above factors. We can also say that life gives the new age art a constant source of inspiration, and in turn, art represents life.

3.1.6 Service to Society

The most important characteristic of the new age art is service. In art, serviceability is the transformation of the way of life with innovative thinking, providing new life possibilities for human life. Whether it is the application of professional information conveyed in commercial activities or the application of behaviour in ordinary life, new-age art allows human beings to enjoy a higher value of meaning and live with more quality. Simpler, more efficient, more natural, more comfortable, and more meaningful is the ultimate purpose of New Age Art. The purpose of new-age art is to cultivate art talent with professionalism, and the results of art are ultimately expressed through excellent products. Steve Jobs and the art of Apple products fully incorporated this form of expression. Apple's art changed the behaviour of modern people, and Job's design dream was precisely designed to change the world. He used pioneering, disruptive artistic activity to achieve his goal of serving consumers, and he achieved it.

3.2 Realization of the Value of New Age Art

3.2.1 Moral Education Function of New Age Art

Aesthetic value education is embodied in new age art. With the increasing openness and continuous development of society, what kind of aesthetic values college students should establish has encountered an unprecedented challenge? In essence, aesthetic values are the reflection of people's social existence and a component of social consciousness, which both positively affects the spiritual world of people and is reflected in their practical activities of transforming the objective world. Understanding the current situation and characteristics of the formation of aesthetic values of contemporary college students and their correct guidance methods is both a theoretical course for the study of contemporary college students and an important task of ideological education. Marx pointed out, "The progress of society is the crystallization of man's pursuit of beauty". Nature, society and art, which are both the field of existence and the expression of beauty, represent the progressive content and ideal of human practice. Contemporary college students have unique aesthetic consciousness, and their aesthetic attitude, aesthetic standard and aesthetic ideal reflect the rational demand of historical development. As the high knowledge class of social youth, their aesthetic value influences the aesthetic interest, style and tendency of the nation, era and youth and reflects the progress degree of socialist spiritual civilization development from one side.

New-age art can cultivate people's sentiments. Aristotle believed that art has the role of "katharsis", i.e., cultivation, purification, catharsis, sublimation, etc., fully affirming the role of art in cultivating and inculcating people. Excellent art works can make people produce this "harmless pleasure" and can purify the mind and perfect character to achieve the purpose of educating people. New-age art can enhance people's cultivation and sublimation of values. In a sense, moral cultivation is built on the aesthetic state. People can discover the beauty of nature and social life through various forms and rich contents of art practice, cause emotional resonance in "harmless pleasure", achieve harmony of thought, and thus enhance the realm of consciousness.

In short, the nurturing function of new-age art is effectively integrated into the cultivation of the core values of college students, and through the form of new-age art practice, abstract value education is transformed into the inner perception and emotional sublimation of college students so that the education of socialist core values can truly realize "internalization in the heart and externalization in action".

3.2.2 The Intellectual Education Function of Art in the New Era

The president of North-western Polytechnic University believes that we train students with a more developed left brain and an imbalance in the training of the right part of the brain. To develop student's minds in a balanced way and to improve the overall intellectual and non-intellectual factors of students, quality education must be strengthened. New Age art has the function of nurturing morality and education, and there is a wealth of research results about the effects New Age art has on developing students' intellectual abilities such as observation, memory, imagination, thinking power, and attention. Research on the impact of New Age art on nonintellectual factors. The impact of New Age art on human nonintellectual factors is obvious: through the study of art, it stimulates motivation,

interest, emotion, and will factors such as motivation, interest, self-confidence, self-control, and persistence and changes their personality traits.

3.2.3 K-Means-Based New Age Art Analysis

The mathematical ideas used in this clustering method are quite simple, but the clustering is truly effective. For the first step of the algorithm, a point was randomly selected as the source centre of the cluster. After setting, the new cluster centre was calculated for the new class. If the centre of the nearest class does not change between two adjacent points, it indicates the end of the sampling setting and the convergence of the class standard function.

This algorithm is a dynamic clustering method, and its iterative process uses a batch modification method, which means that in each iteration, each sample is examined to see if it is correctly classified, and if it is not, further adjustments are made. If all the samples are classified in one iteration of the algorithm, no adjustment is made, and the cluster centres are not changed, which means that the algorithm J_c has converged and is finished. The framework of this algorithm is as follows.

(1) Restrict the dataset of size n.
(2) Calculate the distance that joining can satisfy.

$$D\left(x_i, z_k(I)\right) = \min \left\{D\left(x_i, z_j(I)\right)\right\} \tag{1}$$

(3) Calculate the error squared as well as the criterion function J_c.

$$J_c(I) = \sum_{i=1}^{k} \sum_{k=1}^{n_j} \left\|x_k^j - Z_j(I)\right\|^2 \tag{2}$$

(4) If $\left|J_c(I) - J_c(I-1)\right| < \xi$, then the algorithm ends, calculates k new cluster centres $Z_j(I) = \frac{1}{n} \sum_{i=1}^{n_j} x_i^j$, and returns to (2).

Applying the above clustering methods to the process of new age art analysis, such steps can be roughly divided into the following: data integration, data cleaning, data conversion, data mining, and knowledge acquisition.

(1) Integration of achievement data
    At this stage, we believe that the basis of the new era of art analysis cannot be based solely on the total score of the entrance test as the basis to allow more students to more accurately understand the content needs to be understood.
(2) Data cleaning
    Data cleaning mainly consists of filling in missing data. In this paper, we omitted the student's name, the time of the test and other data column components that are not related to the data analysis.
(3) Data conversion process
    The process of data conversion is designed to target the data for relatively standardized processing, and the format of the data is then manipulated to eventually match the data mining algorithm. For the clustering analysis of student grades, the data types of student grades in each chapter and total grades are unified into numerical types.

(4) Data analysis

The art data are used as the initial data for the K-means clustering algorithm for cluster analysis, and the final results of the New Age art analysis are obtained.

3.3 Art Style Learning Algorithm Based on the Strategy Gradient Method

The method of directly attributing the policy gradient variance to the regular term is applied here, which makes the gradient deviation more significant. In this paper, variance regularization is introduced into the parameter search algorithm, and the PGPE method with optimal cardinality as the artistic style research framework is selected. Specifically, PGPE uses a deterministic strategy with a linear structure $\theta^T \phi(s)$, where $\phi(s)$ is a vector of basic functions. The strategy parameters θ obey a prior distribution $p(\theta|\rho)$ with respect to the hyperparameter ρ.

The expected payoff is defined as a hyperparameter function $\rho : J(\rho) := E_\rho[R(h)]$ with respect to h and θ, where E_ρ denotes the expectation with respect to $p(h, \theta|\rho) = p(h, \theta)p(\theta|\rho)$. In the PGPE, we optimize p to maximize $J(\rho)$, i.e., the optimal hyperparameter ρ^* is obtained by $\rho^* := \arg\max_\rho J(\rho)$. The gradient method is used for $\rho^* : \rho \leftarrow \rho + \varepsilon \nabla_\rho J(\rho)$, where the gradient with respect to the expected payoff of parameter ρ is expressed as

$$\nabla_\rho J(\rho) = E_\rho[R(h)\nabla_\rho \log p(\theta|\rho)] \tag{3}$$

In the actual system, the expectation is to compute from the collected sampled data. The current iterative data are set to $D = \left\{ (\theta_n, h_n) \right\}_{n=1}^N$, where for each sequence data h_n obeys $p(h|\theta_n)$, parameter θ_n obeys $p(\theta_n|\rho)$. However, it still suffers from instability. We regularize the objective function for the following.

$$\Phi(\rho) = J(\rho) - \lambda V(\rho) \tag{4}$$

$$V(\rho) = \mathrm{Var}_\rho[R(h)\nabla_\rho \log p(\theta|\rho)] \tag{5}$$

Subsequently,

$$\rho \leftarrow \rho + \varepsilon \nabla_\rho \Phi(\rho) \tag{6}$$

where the gradient is given by the following form.

$$\nabla_\rho \Phi(\rho) = \nabla_\rho J(\rho) - \lambda \nabla_\rho V(\rho) \tag{7}$$

$$
\begin{aligned}
V(\rho) &= \mathrm{Var}_{p(h,\theta|\rho)}[R(h)\nabla_\rho \log p(\theta|\rho)] \\
&= \sum_{i=1}^l E_\rho\left[(R(h)\nabla_{\rho_1} \log p(\theta|\rho))^2 \right] - \sum_{i=1}^l \left(E_\rho[R(h)\nabla_{\rho_i} \log p(\theta|\rho)] \right)^2 \\
&= \sum_{i=1}^l E_\rho\left[(R(h)\nabla_{\rho_i} \log p(\theta|\rho))^2 \right] - \sum_{i=1}^l \left(\nabla_{\rho_i} J(\rho) \right)^2
\end{aligned} \tag{8}
$$

$$\nabla_\rho V(\rho) = \left(\nabla_{\rho_l} V(\rho), \ldots, \nabla_{\rho_l} V(\rho) \right)^T \tag{9}$$

$$\nabla_{\rho_1} V(\rho) = E_{\rho_i}\left[(R(h))^2\left(\left(\nabla_{\rho_i}\log p(\theta|\rho)\right)^3 + 2\nabla_{\rho_i}\log p(\theta|\rho)\nabla_{\rho_1}^2\log p(\theta|\rho)\right)\right] - 2\nabla_{\rho_1}J(\rho)\nabla_{\rho_1}^2 J(\rho)$$

(10)

$$\nabla_{\rho_i}J(\rho) = E_\rho\left[\nabla_{\rho_1}\log p(\theta|\rho)R(h)\right]$$

(11)

$$\nabla_{\rho_i}^2 J(\rho) = E_\rho\left[R(h)\left(\left(\nabla_{\rho_i}\log p(\theta|\rho)\right)^2 + \nabla_{\rho_i}^2\log p(\theta|\rho)\right)\right]$$

(12)

In summary,

$$\nabla_{\rho_i}\hat{\Phi}(\rho) = \nabla_{\rho_i}\hat{J}(\rho) - \lambda\nabla_{\rho_i}\hat{V}(\rho)$$

(13)

where

$$
\begin{aligned}
\nabla_{\rho_i}\hat{V}(\rho) &= \tfrac{1}{N}\sum_{n=1}^{N}\left[(R(h_n))^2\left(\left(\nabla_{\rho_i}\log p(\theta|\rho)\right)^3 + 2\nabla_{\rho_1}\log p(\theta_n|\rho)\nabla_{\rho_i}^2\log p(\theta_n|\rho)\right)\right] - 2\nabla_{\rho_i}\hat{J}(\rho)\nabla_{\rho_i}^2\hat{J}(\rho),\\
\nabla_{\rho_t}\hat{J}(\rho) &= \tfrac{1}{N}\sum_{n=1}^{N}R(h_n)\nabla_{\rho_1}\log p(\theta_n|\rho),\\
\nabla_{\rho_1}^2\hat{J}(\rho) &= \tfrac{1}{N}\sum_{n=1}^{N}R(h_n)\left[\left(\nabla_{\rho_1}\log p(\theta_n|\rho)\right)^2 + \nabla_{\rho_1}^2\log p(\theta_n|\rho)\right]
\end{aligned}
$$

(14)

It is worth noting that $\log p(\theta|\rho)$, the second-order derivatives with respect to η_i and τ_i, can be expressed as

$$\nabla_{\eta_i}^2\log p(\theta|\rho) = -\frac{1}{\tau_i^2}$$

(15)

$$\nabla_{\tau_i}^2\log p(\theta|p) = \frac{\tau_i^2 - 3\left(\theta_i - \eta_i\right)^2}{\tau_i^4}$$

(16)

In the real system, we go a step further and compute the optimal baseline $\hat{b}$ from the gradient estimation new era art $R(h_n)$ described above.

4 Case Study

4.1 Basic Information

This research was conducted in ten typical universities in a province, and the selected types were balanced, including science and engineering, Chinese, science and technology, art and other universities, mainly covering state-owned "double construction" universities, ordinary universities, independent universities and vocational colleges. The respondents are students, administrators and teachers from ten schools, so they are representative. The sample questionnaire is shown in Table 2.

The questionnaire is divided into five parts. The first part involves basic personal information, including institutions, the nature of schools, students' gender, occupation attribution, political opinions, etc. The second part is the recognition of excellent works of art. The third part: Art acquisition. The fourth part is the propaganda and practice of analysing excellent works of art. The fifth part is based on the research results of the second, third and fourth parts. The fifth part is based on practical measures to combine excellent works of art with

Table 2 Basic personal information of the respondents

Category	Subcategory	Number of people
Gender		
Male	565	48.2
Female	588	51.8
Schools		
University A	110	9
University B	132	11.5
University C	115	10
University D	125	11.5
University E	130	10
University F	98	12
University G	105	11.4
University H	125	9
University I	100	9
University J	102	12
Major		
Arts and sciences	400	35.4
Science and engineering	390	33.9
Art	199	17.2
Sports	142	12.2
Other	22	2
Education level		
Specialized students	225	19.5
Undergraduates	702	62
Graduate student and above	225	19.5
Political appearance		
Party members (including reserve members)	102	8
Group members	1005	88
Masses	52	4

moral education, the effectiveness of social functions, the main problems and difficulties faced by society and the social functions of excellent works of art.

4.2 Analysis of the Current Situation of the Survey

4.2.1 Cognitive Recognition of Excellent Art Works

(1) Cognition of excellent artwork

Regarding the cognition of excellent art works, the questionnaire was designed with three questions, which were distributed in questions 6–8 of the questionnaire. The main contents include the macro cognition of excellent art works, the daily accumulation status and the understanding of typical excellent art works.

Fig. 1 Survey on the number of appreciative works on excellent art
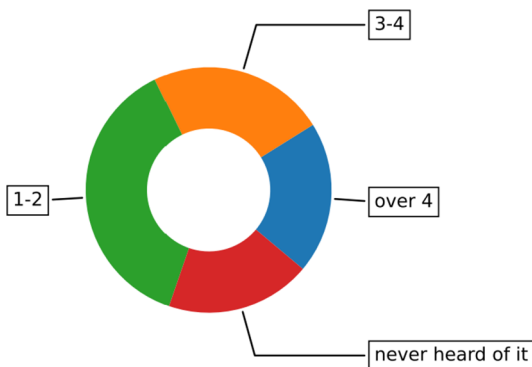
Question 1: "Do you know about excellent artwork?" Only 4.6% said they knew a lot about it and were very interested in it; 52.2% of the students only knew a little and were generally interested; 43.1% said they did not know much about excellent art works and were not very interested in them; 0.1% said they did not know at all and were not interested. In the context of cultural self-confidence, although a very small number of students were not interested in learning more about good art works at all, most of them did not care much about good art works as a result.

Question 2: "How many excellent works of art have you seriously appreciated?" Among them, those who have seriously appreciated 1–2 works account for the highest percentage, 37.5%; those who have appreciated 3–4 works account for 23.33%; those who have appreciated more than 4 works account for 20%; and 19.7% have heard of but have not seriously appreciated excellent art works. From this survey, we can see the degree of contemporary interest in appreciating excellent art works, as shown in Fig. 1.

The results of the survey of the above two questions show that, in the context of cultural confidence, the new generation has a higher overall understanding of excellent art works, but the actual appreciation of excellent art works is not very considerable, and the understanding of the deeper spiritual and ideological connotations contained in excellent art works is even more superficial and, to a large extent, lacks a certain degree of systematic teaching and in-depth understanding.

(2) Recognition of excellent artworks

A total of four comprehensive questions were designed to understand and grasp the degree of recognition of excellent art works and their attitudes towards them.

Question 1: "What is your attitude towards excellent artwork?" In the survey of this question, we found that 39.17% of them agree very much and should be vigorously promoted; 45.83% of them agree more but have no extra time to appreciate excellent art works and have no good way to appreciate excellent art works; 10.83% of them do not agree much with excellent art works and should give up most of them; and 4.17% of them are against attitudes that are too conservative and unsuitable for the needs of development, as shown in Fig. 2.

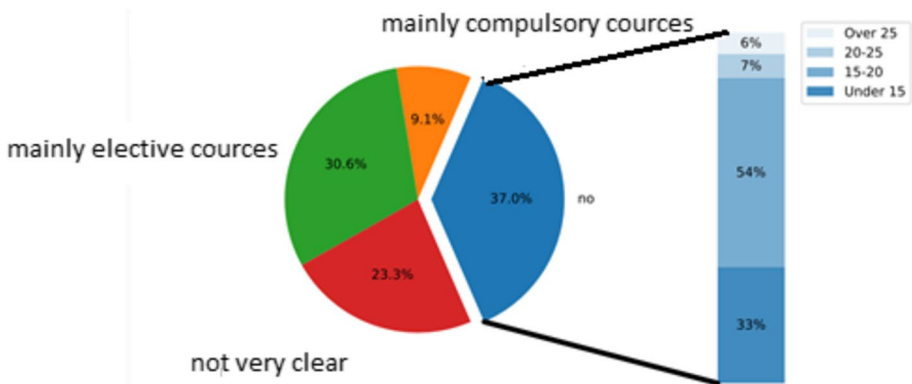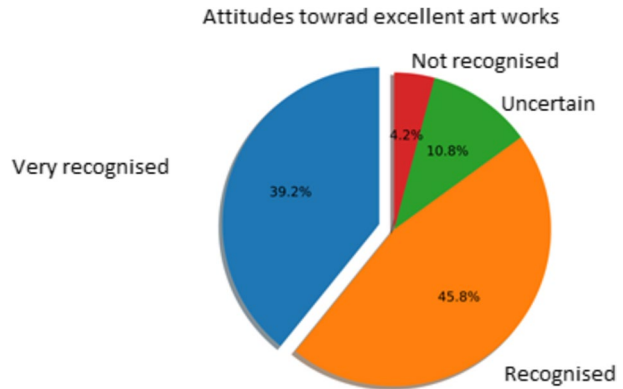**Fig. 2** Survey of attitudes towards excellent artwork

Fig. 3 Survey of schools offering courses related to excellent artwork

4.2.2 The Function of Excellent Artwork in Moral Education

The integration of excellent art works into moral education is the premise of excellent art works in playing social functions. To understand the situation of excellent art works in playing social functions, we must first understand the integration of excellent art works into moral education and second understand the role of excellent art works play in moral education.

(1) The current situation of activities related to excellent artwork from the perspective of the school nurturing environment

To investigate the integration of excellent art works into moral education, the questionnaire included eight questions to investigate and analyse from the perspective of curriculum setting and integration environment.

Question 1, "In what way does your school offer courses related to excellent artwork?" Approximately 9.1% chose to offer mainly compulsory courses; 30.6% chose to offer mainly elective courses; 37% chose not to offer compulsory courses; and 23.3% chose not quite sure, as shown in Fig. 3.

Table 3 Survey on the nurturing environment of excellent artwork

Activity	Frequency	Number of People	Percentage (%)
	Frequently	203	17.5
Your university invites new era art experts and inheritors of intangible cultural heritage into campus and classrooms	Occasionally	569	49.2
	Never	128	11.3
	Not sure	252	21.8
	Frequently	190	16.6
Your college or university carries out excellent new era art works exhibition, performance activities, and special educational activities	Occasionally	459	39.8
	Never	245	21.2
	Not sure	258	22.6

Question 2, "Does your school have a special campus network platform about excellent art works?" A total of 19.1% chose to have a relevant platform, 29.6% chose not to have a relevant platform, and 51.3% chose the not sure option.

Question 3, "Does your school invite art experts, intangible cultural heritage inheritors, etc., to campus and into the classroom?" A total of 17.5% chose to invite art experts to campus and classroom regularly; 49.2% chose to invite art experts to campus occasionally to give lectures and other activities; 11.3% chose to never invite famous artists to give lectures and other activities; 21.8% said they were not sure and had not paid attention to this matter.

Question 4, "Are excellent artwork exhibition and performance activities and special educational activities hosted in your location?" A total of 16.5% chose to carry out related activities frequently; 39.8% chose to carry out related activities occasionally; 21.2% chose to never carry out activities; and 22.6% chose the not sure option. (As shown in Table 3).

(2) The situation of the function of excellent artwork in moral education

To investigate the role excellent art works play in social functions, this questionnaire sets three subquestions in terms of the problems that exist in playing social functions of excellent art works.

Question 1, "What are the shortcomings in the teaching process of combining excellent art works with moral education in your location?" This question used a multiple-choice approach, in which 43.9% chose an unreasonable curriculum; 49.3% chose the literary quality of teachers to be improved; 56.3% chose a single teaching method; 55.3% chose imperfect teaching facilities; and 34.9% chose obscure and unsystematic teaching content, as shown in Fig. 4.

Question 2, "What resistance do you think exists from the social level in the process of incorporating excellent artwork in moral education?" This question is also a multiple-choice survey, in which 56% of respondents chose the importance of excellent art and culture education to be improved; 49.3% of them think that the educational new era art of
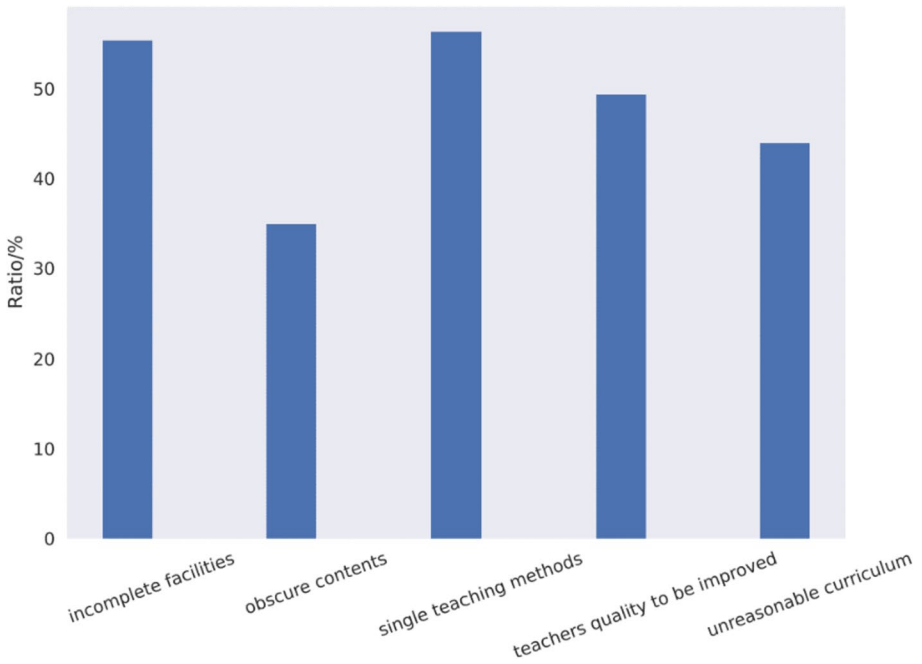
Fig. 4 Survey of the problems in teaching the combination of excellent artwork and moral education
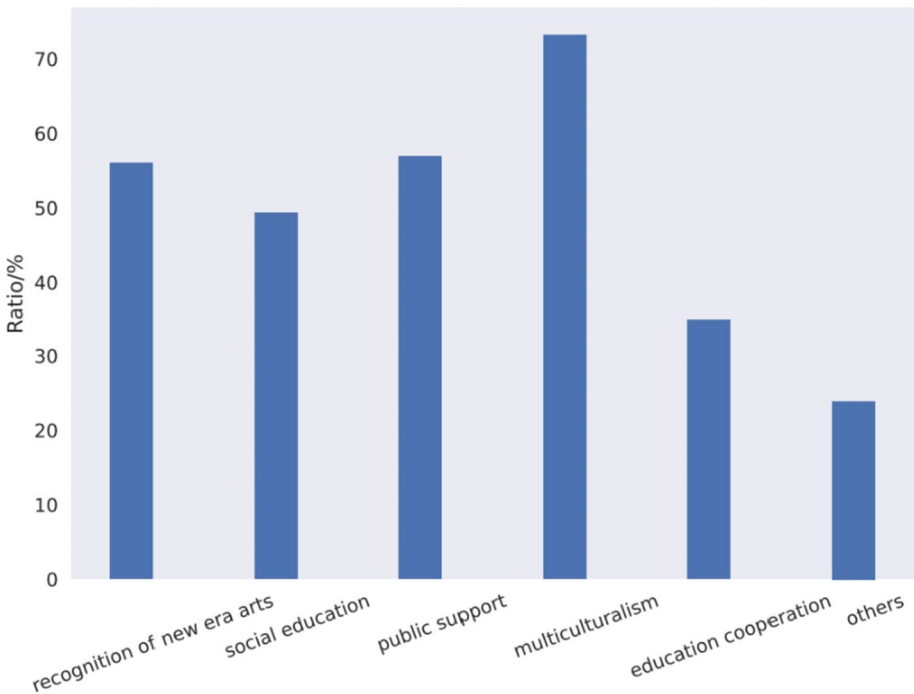

Fig. 5 Survey of social resistance to the social function of excellent artwork
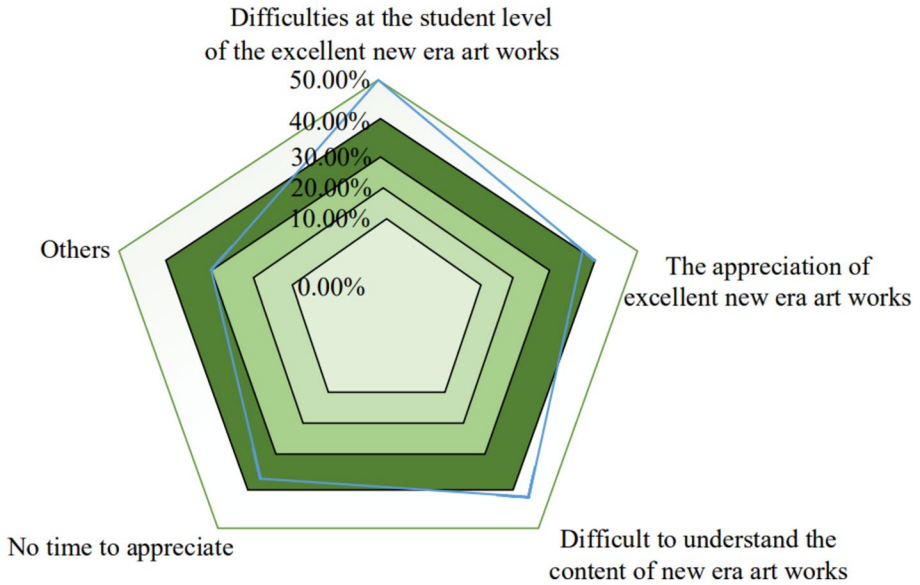
Fig. 6 Investigation of the problems that exist at the student level when excellent artwork plays social functions

the whole society needs to be strengthened; 56.9% of them choose the low degree of support from the public; 73.2% of them choose the impact of multiculturalism; 34.9% of them choose the low degree of new era art of family education; and 23.9% choose others, believing that there are other social factors that prevent excellent art works from performing their social functions, as in Fig. 5.

Question 3, "What resistance do you think exists from the student level in the process of excellent artwork functioning in moral education?" This question was surveyed in a multiple-choice format, and the survey results showed that 49.4% chose to have insufficient knowledge and little understanding of excellent art works; 39.3% chose to have little interest in excellent art works; 45.3% chose to have difficulty understanding art content; 36.9% chose to have no time to appreciate it; and 23.9% chose others, as shown in Fig. 6.

In summary, the problems and dilemmas of combining excellent art works with moral education in teaching and understanding the problems and dilemmas of excellent art works in playing social functions from the perspective of the social level and student level point to the navigation for exploring the realization path of excellent art works in moral education.

5 Conclusion

In the new historical development period of new era art, its entertainment function, edification function and cultural inheritance function still have a relatively clear social positioning. In summary, the socialist cultural industry with Chinese characteristics, as the industrial category with the most potential in the economic industrial structure of the new era, should play a more prominent value function. In other words, its functional value is reflected in occupying the quantitative advantage in the economic structure through further development, promoting the quality improvement of people's life and industrial development, inheriting the traditional

culture of the Chinese nation, further strengthening people's cultural self-confidence, and creating literary and artistic masterpieces. The goal of this study was to investigate how great works of art are perceived and understood in modern social and educational situations, with an emphasis on how they fit into moral education and how they foster cultural self-confidence. The use of a thorough questionnaire at ten institutions yielded insightful information about how instructors, administrators, and students view and interact with outstanding works of art. Our study produced a number of important conclusions. First, there was a noticeable lack of profound engagement and appreciation among respondents, even if they were generally aware of outstanding works of art. This study shows a disconnect between awareness and meaningful involvement, challenging our initial prediction that the younger generation would have a profound comprehension and interest in these works. The study also revealed that although the edifying and cultural legacy functions of great art works are acknowledged, their real integration into moral instruction is confronted with considerable obstacles. These difficulties include the requirement for better organized teaching strategies, instructors with higher literary standards, and a wider variety of interesting and dynamic teaching techniques. This result supports our goal of identifying areas for improvement and evaluating the contribution of outstanding artistic creations to moral education. From a social standpoint, the study showed that high-quality artistic creations have the capacity to boost cultural self-esteem and support the cultural sector. However, for a variety of reasons, including the influence of diversity and a lack of public backing, this promise is not being fully realized. This finding partially supports our theory about the social roles played by great works of art, but it also points to the need for deliberate actions to increase their impact. As a result, while great works of art have a specific place in the socialist cultural sector, their usefulness in the modern day goes beyond their sheer inclusion in the economy. The study emphasizes how these works' presentation, instruction, and integration into the framework of moral education and social life need to be further developed. It is essential to close the awareness and meaningful engagement gap, improve the calibre and variety of instructional strategies, and increase public acceptance and understanding. Only by taking these steps can the study of artistic creations improve people's lives, advance industrial growth, preserve traditional Chinese culture, and promote cultural self-confidence.

Data Availability The experimental data used to support the findings of this study are available from the corresponding author upon request.

Declarations

Conflict of interest The authors report that there are no competing interests to declare.

Consent for publication All authors reviewed the results, approved the final version of the manuscript and agreed to publish it.

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