To Explore the Influence of College Students' Emotional Reseponse on Visual Art Intangible Cultural Heritage on Their Participation in Tianjin, China

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Abstract

Abstract Objective To explore the impact of students' emotional responses to visual arts intangible cultural heritage on their participation in Tianjin, China, and explore effective strategies to enhance students' emotional responses and classroom participation. Methods A total of 164 students majoring in art in a school in Tianjin were selected by random sampling method, and questionnaires on class participation and emotional response were used to conduct a survey. Statistical analysis was carried out by descriptive statistics, independent sample T-test, correlation analysis and other methods. Results The class participation of art majors was at the upper middle level (M = 3.77, with the highest score of behavior participation being 3.99), and the emotional response was also at the upper middle level (M = 3.87, with the highest score of behavior being 3.98). There was a significant correlation between emotional response and class participation in all dimensions and total scores (r = 0.670, P < 0.01). The regression analysis shows that the prediction of emotional response to class participation is 49.20%. Conclusion Improving students' emotional response can effectively improve students' participation in class.

Keywords: *College students majoring in art, Intangible cultural heritage, Visual art, Emotional response, Degree of participation*

Introduction

Intangible cultural heritage (hereinafter referred to as intangible cultural heritage) is an important part of cultural heritage and an inseparable wealth in the development of human culture. Therefore, the protection and development of intangible cultural heritage is particularly important. The Convention for the Safeguarding of the Intangible Cultural Heritage, formally adopted by UNESCO at its 32nd session in 2003, defines intangible cultural heritage as "the practices, performances, forms of expression, knowledge and skills, as well as related tools, objects, artefacts and cultural places, which are regarded by groups, groups and sometimes individuals as their cultural heritage". According to UNESCO's definition of intangible cultural heritage, it clearly shows that it has the basic characteristics of uniqueness, living rheology, inheritance, nationality, regionalism and so on. These characteristics are born from the oral experience of human life, the traditional culture passed down from generation to generation, and the special performance rich in regional characteristics. However, the fast-paced life makes the traditional folk culture gradually separated from the public life, and modern culture almost completely takes away people's attention to traditional culture, and even ordinary people's attention to the development of cultural projects is not ideal at this stage.

Vision is an inherent feeling that human beings are born with, and it is one of the most basic ways for human beings to understand things. With the development of social culture, people's current requirements for vision are no longer limited to the image presentation of things, and visual symbols, as a new language symbol in communication activities, have long formed a "look" culture - visual culture. With the advent of the era of picture reading, traditional media such as newspapers, magazines, television and movies are the main carriers of visual communication. They have done their best to effectively save, protect, promote and inherit the intangible cultural heritage in the dissemination of intangible cultural heritage, so that the protection of intangible cultural heritage has achieved very obvious results. While promoting intangible cultural heritage, the media are also building the value ideology of intangible cultural heritage, because the art media can make people feel that the communication content concerned by the mass media is mainstream

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or worthy of affirmation and emulation, and be advocated in society through the agenda-setting function of communication.

With the accelerated pace of social modernization and urbanization, many traditional folk cultures in our country are rapidly disappearing. In today's consumption, specific purchasing behaviors can enable consumers to meet their cultural needs, because in a commercialized society, culture must be regarded as a commodity in pursuit of spiritual satisfaction. If intangible cultural heritage wants to expand the audience, it must be integrated into daily life. Some visual elements are integrated into the development and production of intangible cultural heritage products, so that consumers can feel the culture in the most intuitive way.

Under the background of economic globalization, the development of cultural projects also tends to brand. In order to create cultural heritage projects with local characteristics, the only way is to study and analyze the cultural heritage contents, refine and integrate them. On the premise of grasping the historical background and development direction of the overall regional culture, the cultural heritage projects can be better integrated into the life of the public with the help of the integrated marketing concept of cultural brands, so that culture is no longer just an abstract concept. It is a systematic and coherent piece of propaganda. From the perspective of communication, graphics and images are the most intuitive communication symbols, and visual language with good artistic quality is an important factor in effectively transmitting information and attracting as many audiences as possible. Therefore, visual image is an important facade of brand promotion, VI(visual system) creative design as an important part of modern corporate image design, equivalent to the appearance of an enterprise, in the complicated various big data, with personality and identity identification to help spread corporate culture concept, establish corporate awareness. Similarly, in cultural brands, VI design can not only express the cultural connotation of intangible cultural heritage brands through visual graphics design, but also effectively unify the visual promotion of brands, so as to facilitate the public's memory of the brand, improve brand awareness, and build brand reputation. A good VI system is a powerful voice for cultural brands to firmly establish a foothold in the market competition. Good protection of intangible cultural heritage not only has a unique value for the survival and development of human civilization, but also reflects the identity and inheritance of the outstanding culture and wisdom of our ancestors. Through visual communication channels, the space and time restrictions on the promotion and dissemination of intangible cultural heritage are broken, and while enhancing the dissemination and circulation, new strategies for the promotion of intangible cultural heritage are developed, the cognitive scope of intangible cultural heritage is expanded, the awareness of intangible cultural heritage is improved, and a favorable platform for the inheritance and development of intangible cultural heritage is opened up.

Education is an important way and means of cultural inheritance in human society, and school is an important position of education and a base of cultural inheritance, which should be an effective way to protect intangible cultural heritage. However, since school education always takes mainstream culture as its value orientation and intangible cultural heritage mostly belongs to folk culture, its proper role in school education inheritance has been absent for a long time. Article 34 of the Intangible Cultural Heritage Protection Law of the People's Republic of China in 2011 clearly stipulates that schools shall carry out relevant intangible cultural heritage education in accordance with the provisions of the competent department of education under The State Council. Based on this, this paper aims to explore the impact of college students' emotional responses to visual arts intangible cultural heritage on their participation in Tianjin, China, and explore effective strategies to enhance students' emotional responses and classroom participation.

Literature Review

Emotional Response Overview

Emotion is a general term for a series of concepts including specific concepts such as emotions, moods and attitudes [1-2]. As one of the basic characteristics of an individual, emotion affects the individual's

instinct, perception, cognition, social judgment, and affects various behaviors [3]. Individual core emotion can be divided into two dimensions: trait emotion and state emotion [4]. Trait emotion is a specific type of subjective feeling that has persistence and stability in the absence of stimulus [5-6]. State emotion is a psychological state caused by a certain stimulus, with situational and temporary characteristics [7]. In other words, trait emotion is rooted in an individual's endogenous attributes, while state emotion is triggered by external stimuli and will change with changes in external situations. A large number of studies have shown that emotions can explain a large number of differences in individuals' cognition and behavior, and in some cases, emotions are even more explanatory than cognition [8-13].

Definition And Measurement of Student Engagement

Student engagement refers to the degree of student involvement and enthusiasm in learning activities during the learning process. Student engagement can be defined from multiple dimensions, including emotional engagement, cognitive engagement and behavioral engagement. Emotional participation refers to students' attitude, interest and emotional involvement in learning, cognitive participation refers to students' understanding, thinking and exploration of learning content, and behavioral participation refers to students' actual action and participation in learning activities. Various methods can be used to measure student engagement, such as observation records, questionnaires, interviews, etc. Observation records can be used to assess students' participation by observing their behavioral performance, questionnaires can be used to obtain participation information by students' self-reports, and interviews can give an in-depth understanding of students' participation experience and motivation. In addition, technical tools such as learning analytics and data mining can be used to quantify and analyze student engagement. By integrating various methods, students' participation can be comprehensively understood, providing references for educators to promote students' active participation and active learning.

The Influence of Emotional Response on Student Engagement

Positive Impact Analysis

Increase Learning Interest and Motivation

Through the introduction of multimedia and interactive technology, visual arts education enriches the form and content of learning materials. This novel way of learning can stimulate students' curiosity and desire to explore, so that they have a stronger interest in learning. For example, using virtual LABS and simulation software, students can conduct scientific experiments without the constraints of physical space, and this new way of learning allows students to experience an unprecedented joy of learning, which increases their interest in the content. At the same time, the instant feedback mechanism on the digital platform can reward students' learning results in a timely manner, enhancing their sense of accomplishment and self-efficacy. These factors play a crucial role in improving students' learning motivation. In traditional learning environments, it often takes time for students to receive feedback on their learning outcomes, but on digital platforms, feedback is instant, which allows students to know their progress and mastery in a timely manner, thus creating a continuous motivational effect.

Promote Interactive and Cooperative Learning

Digital tools and platforms in visual arts education provide more convenient and diverse ways for students to interact with each other and between students and teachers. Features such as online discussion boards, collaborative documents, and virtual group activities allow students to communicate and collaborate in real time, even when they are not in the same physical space. Collaborative learning supported by this technology not only enhances students' social interaction skills, but also promotes deep understanding and application of knowledge. Through the collision of collective intelligence and different perspectives, students are able to learn new knowledge from their peers and their problem-solving skills are strengthened.

Enhance Personalized Learning Experiences

With the advancement of visual arts education, it is possible to achieve personalized learning content and progress. Through advanced intelligent learning systems and adaptive learning algorithms, each student has access to customized learning resources and guidance based on their learning pace and understanding level. This personalized experience makes learning more in line with individual learning habits, learning needs, and learning interests, thereby increasing student satisfaction and engagement. Intelligent learning systems typically have strong natural language processing and machine learning capabilities, are able to understand students' learning needs and preferences, and analyze students' learning history and learning behavior to provide personalized learning recommendations and resources. At the same time, the adaptive learning algorithm can dynamically adjust the learning content and difficulty according to the learning progress and understanding level of students to adapt to the needs and learning styles of students. This highly personalized learning process not only helps improve students' learning effectiveness, but also enhances their ability to learn independently. Digital tools provide real-time feedback and advice based on students' learning performance, helping students adjust learning strategies in time to better master knowledge and skills. At the same time, students can also study independently according to their own time and place, and more flexible arrangements for learning progress and methods.

Negative Impact Analysis

Distraction And Information Overload

With the continuous deepening of visual arts education, students are faced with a large number of digital information and resources in the learning process, which leads to the problem of distraction and information overload to a certain extent. As the online environment is full of temptations, such as social media, online games and instant messaging, students may be distracted while studying, which not only reduces the efficiency of learning, but also may reduce the in-depth understanding of what students are learning. In addition, information overload is also an important problem. The digitalization of education provides a huge amount of learning resources, and students may feel stressed because it is difficult to sift through the information that is really useful to them. This ability to extract key knowledge from the huge amount of information is something that students need to develop, but in the short term it may have a negative impact on students' learning, making them confused and frustrated.

Technical Dependencies and Operational Challenges

In the course of visual arts education, technology dependence has become a problem that cannot be ignored. Students may rely too much on technology to complete learning tasks and neglect the development of basic learning skills and knowledge. Technical glitches or unfamiliarity with the operation of new tools can be barriers to learning for students. In addition, there are differences in the ability of different students to adapt to technology, which may cause some students to feel frustrated in the learning process. Technology is changing rapidly, and both students and teachers need to constantly learn how to use new tools, which is a big challenge for some learners who do not have enough technical support. Due to the difficulty of these operations, students may have resistance to learning, which affects the overall effect of digital transformation in education.

The Widening of The Digital Divide

Visual arts education, while theoretically providing equal learning opportunities for all students, may in practice exacerbate the digital divide, that is, unequal access to technical resources. In some remote or economically underdeveloped areas, students may not be able to enjoy the dividends of digital education due to the lack of necessary hardware equipment, Internet connectivity or technical support. In addition, family economic conditions and parents' education level may also affect students' access to digital educational resources. This inequality can lead to polarisation of academic achievement, and for students who do not have adequate access to digital resources, their learning engagement and academic performance can be negatively impacted. Therefore, solving the problem of digital divide and ensuring the fair

distribution of educational resources are urgent problems to be solved in the process of digital transformation of education.

Objects And Methods

Research Objects

In this study, 184 college students were randomly selected from 6 classes of 2023 art major in a school in Tianjin in October 2023 to conduct a questionnaire survey. All the students were informed and agreed to participate in this study. In the end, 170 valid questionnaires were collected. Since there were only 6 male students, and the ratio of male to female was very large, the male students' questionnaires were excluded, and the final statistical questionnaires were 164, and the questionnaire recovery rate was 89.13%.

Research Tools

Classroom Participation Scale

Using the class participation scale compiled by Zhang Xu [14], the self-perceived class participation of college students was evaluated. There are 17 items in the scale, which can be divided into three dimensions: behavioral participation, cognitive participation and emotional participation. The questionnaire was scored using Likert's 5-point scoring method, namely, "fully consistent", "basically consistent", "uncertain", "basically inconsistent" and "completely inconsistent", with values of 5, 4, 3, 2 and 1 respectively. The higher the value, the higher the class participation. After testing, the Cronbach's α coefficient of the revised scale was 0.885, indicating that the scale structure was stable.

Emotional Response

The questionnaire of college students' emotional response compiled by Qin Panbo in 2009 is adopted [15]. The questionnaire has 23 questions and has good reliability and validity after strict test. It has designed 4 psychological dimensions of emotional response, namely cognition, emotion, behavior and adaptation. The questionnaire was scored using 5-point Likert scoring method, namely, "fully consistent", "basically consistent", "uncertain", "basically inconsistent" and "completely inconsistent". Values of 5, 4, 3, 2 and 1 were assigned respectively. The higher the value, the higher the emotional response, the correlation, effect and degree were obtained by matching the correlation with relevant statistical software. After rigorous test, the reliability and validity of the scale are high, and the internal consistency coefficient is 0.917, and the structural validity coefficient is relatively good, ranging from 0.574 to 0.896.

Statistical Method

SPSS 26.0 was used for data sorting and statistical analysis, and descriptive statistics, correlation analysis, regression analysis and other methods were adopted. $P < 0.05$ indicates significant difference.

Results

Descriptive Statistical Analysis

The classroom participation and emotional response of art majors in Tianjin are shown in Table 1. As can be seen from Table 1, the class participation of art majors is above average, with a score of 3.77, among which the highest score of behavioral participation is 3.99. The emotional response of art majors was also above the average level, with a score of 3.87, and the highest score of behavioral identification was 3.98.

Table 1 Descriptive Statistical Analysis (N=164)

Items	M	SD
Cognitive engagement	3.89	0.80

Emotional engagement	3.44	0.56
Behavioral engagement	3.99	0.61
Total classroom participation score	3.77	0.59
Cognitive class	3.92	0.82
Emotional class	3.81	0.92
Behavior class	3.98	0.85
Adaptive class	3.77	1.00
Total emotional response score	3.87	0.80

Correlation Analysis

As can be seen from Table 2, there is a significant correlation between the emotional response of art majors and classroom participation in the total score and all dimensions.

Table 2 Correlation Analysis

Items	Cognitive class	Emotional class	Behavior class	Adaptive class	Total emotional response score
Cognitive engagement	0.553**	0.638*	0.710**	0.583**	0.696**
Emotional engagement	0.381**	0.480**	0.523**	0.405**	0.501**
Behavioral engagement	0.390**	0.502**	0.589**	0.495**	0.556**
Total classroom participation score	0.510**	0.619*	0.694**	0.565*	0.670*

Note: **P < 0.01 (both sides)

Regression Analysis

As can be seen from Table 3, emotional response of art majors has a good predictive effect on class participation, and emotional response has a very significant impact on class participation of art majors, and the explanation for class participation is 49.20%.

Table 3 Regression Analysis of Emotional Response to Classroom Participation

Item	R^2	$\triangle R^2$	F	β	t	P
Emotional response	0.492	0.479	38.469	1.751	9.760	<0.00

Note: **P < 0.01

Conclusion And Discussion

Conclusion

Current Situation of Class Participation of Art Major College Students in Tianjin

According to the data analysis, the class participation of art majors is at an upper level, which is contrary to the research result of Liu Nan [16], that is, "students are silent and inactive in answering questions in class and in group activities". The reason may be that the objects of this survey are students who have participated in the intangible cultural heritage protection and inheritance activities, which makes them have a high cognitive level. With a clear understanding of the professional ability and knowledge structure required for intangible visual arts, students can plan their professional learning more clearly, actively participate in classroom teaching activities during class, and complete the tasks before and after class with

quality and quantity, thus learning is more correct. However, compared with most undergraduates, art students in Tianjin need to improve their enthusiasm and initiative in learning, especially those students who choose their major involuntarily are more passive in professional learning. Therefore, Tianjin art students need teachers to mobilize their learning enthusiasm and initiative. In the course of teaching, the teacher adopted a combination of online and offline teaching mode in the surveyed classes, and used credit points to motivate students to participate in classroom interaction. Or teachers can improve students' participation in class to some extent by adjusting teaching methods.

Current Situation of Emotional Response of Art Major College Students in Tianjin

According to the data analysis, the emotional response of art majors in Tianjin is above the average level, and the behavioral identification and cognitive identification are higher than the average level. Students have participated in the internship and internship, and have a certain understanding of intangible cultural heritage, and are more clear about the ability and knowledge that an art major student needs to have. In addition, the subjects of this survey are all students majoring in art at a university in Tianjin as their first choice, so their emotional response generally shows a high level. This is basically consistent with the research result of Guo Xue et al. [17] that "the level of emotional response of college students who choose their majors independently is higher than that of students who choose their majors independently, and the level of affective and relevant dimensions is also higher". In addition, because the respondents of this survey have participated in the protection and inheritance of intangible cultural heritage activities, students can have a clearer grasp of their professional ability and professional theoretical knowledge, so they have a more prominent performance in behavioral identification.

The Relationship Between Emotional Response and Classroom Participation of Art Students in Tianjin

According to the data analysis, there is a significant correlation between art students in Tianjin and emotional response, and emotional response can better predict the change of class participation. This is consistent with the conclusions of previous studies. For example, Yang Bowen [18] found in his "Research on Influencing Factors and Strategies of College Students' Classroom Participation" that emotional response, autonomous learning ability and course schedule all have a significant impact on college students' classroom participation, but have a greater impact on emotional response. Therefore, teachers should take advantage of professional teaching opportunities to improve students' professional cognition of preschool education in the course of teaching, so as to improve students' classroom participation. In addition, class participation can also stimulate students' interest in learning, help students gain a sense of accomplishment and self-confidence in professional learning, and thus enhance students' emotional response.

Discussion

The Role of Intangible Cultural Heritage

Intangible Cultural Heritage Is an Important Art Education Resource

According to the connotation of intangible cultural heritage, it is the essence of national culture and a vivid display of human cultural diversity, which is worth cherishing. Intangible cultural heritage is the living fossil of culture, with numerous types and all-encompassing values, such as history, culture, spirit, science, society, aesthetics, education and economy, and is an important educational resource. Many contents in folk art such as music, dance, fine arts and opera have become intangible cultural heritage items. Art education is inseparable from the attention to intangible cultural heritage, and students can get many benefits from it.

The Commonality of Intangible Cultural Heritage and Art

Intangible cultural heritage and art are linked in national spirit. Both of them are the cultural presentation of the national spirit, which contains the national spirit behind the form. Intangible cultural heritage and art are similar in aesthetic ideal, and they are similar in emotion, image, theme and time and space possession. They show their own characteristics in the inheritance of people, express the understanding and exploration

of nature, society and life, and show the pursuit of truth, kindness and beauty. Intangible cultural heritage and art are linked in regional complex, both of them are excellent cultures in the homeland of the nation, carrying the glory of tradition, containing the sincere emotion in the region, and showing the endless cultural power. Intangible cultural heritage and art are similar in the concept of life, both of them are cultural representations of the state of life, and both pursue the rhythm of "slow life".

The Benefits of Intangible Cultural Heritage to the Growth of Art Students

It is conducive to the spiritual improvement of art students

Intangible cultural heritage is an important spiritual presentation. Whether it is traditional oral literature, traditional art, music, dance, or traditional etiquette and festivals, it is the expression and presentation of the deep spiritual world of the people, showing the reflection on social life, containing distinct values, shaping, identifying and conveying the spirit of the community. Intangible cultural heritage is often an expression of human nature, showing profound humanistic feelings. For example, some festival folk customs are often to coordinate the Yin and Yang changes of natural climate, agricultural production and health care of life. Through festivals, harmony between ecology, culture and life can be achieved, so that people's real life can transition safely. The rich philosophical thoughts contained in the intangible cultural heritage are the spiritual wealth that art students can learn from, which is conducive to the promotion of life realm.

It is conducive to the professional study of art students

Intangible cultural heritage is a manifestation of living culture, and many contents are high-quality resources that art students can access. The creative prototype and material of intangible cultural heritage can be used as the prototype and material of artistic creation, its physical manifestation can provide sample cases for artistic works, its living process can inspire the thinking of artistic creation, and its logic can be used as the ideological source. When art has special needs, intangible cultural heritage can often provide ideas and provide infinite possibilities for inspiring artistic innovation. Therefore, art students can integrate intangible cultural heritage into their own quality and improve themselves.

It is conducive to the life practice of art students

Living intangible cultural heritage is a vivid case of artistic creation, and watching and participating in it is conducive to the improvement of artistic literacy. Teaching by word and example and repeated practice are important ways of inheriting intangible cultural heritage, which provides an important reference for art learning. Artistic works are born in life practice, and the spirit of piety, concentration and excellence embodied in them is exactly the spirit of art learning, teaching and creation worth cherishing.

It is conducive to the employment and entrepreneurship of art students

Art students understand and be familiar with some intangible cultural heritage, can improve their own literacy, and can be combined with their own employment. Students with intangible cultural heritage knowledge or skills will be more successful in applying for jobs related to the cultural industry. "Art students have ideas, creativity, professionalism and knowledge. They are receptive to new things and energetic. They want to have a career of their own, so they are the main force in the cultural and creative market." Many items in the intangible cultural heritage have significant economic value and are also a creative combination point. Art students' deep exploration and reasonable and productive protection and development are conducive to the inheritance and development of the intangible cultural heritage, and can also transform it into a cultural industry entrepreneurial project and become a growth point of their own life and career.

Strategies to Enhance the Emotional Response and Participation of College Students to Visual Arts Intangible Cultural Heritage

Native Display Content Emotional Presentation

The display content of intangible heritage mainly includes material display and non-material display, in which the non-material sublimation of material. To a certain extent, the core content of intangible cultural heritage display is neither people nor objects, but skilled skills, special artistic values and rich cultural deposits formed through the long time and space changes. Therefore, the exhibition design should not be limited to distant, static and single physical works, but should incorporate diversified content on the premise of respecting the localization and native content, so that the exhibition can become more than a one-way audio-visual place.

From the content level, the artistic form and thinking characteristics of intangible cultural heritage determine its huge development potential in the interactive field. Artificial intelligence makes the interaction intelligent, intelligent interaction integrates multiple perception channels, brings a new synaesthesia experience, and makes virtual reality truly "virtual into real". For example, the Northern Song Dynasty Zhao Ji's "Listening to Qin" was developed by SAFA into a virtual reality experience. Artificial intelligence technology mimics the cultural context of history, bringing visitors to the scene of more than a thousand years ago, and engaging in dialogue with historical figures without any sense of violation. In addition, the use of artificial intelligence simulation technology, virtual imaging and other technologies can not only realistically restore scenes and characters, but also combine anti-neural network algorithms to allow visitors to "change faces" to participate in the performance, affirming the role changes of visitors. The emotional expression of intangible cultural heritage display content based on native content usually does not cause abrupt feelings of visitors, and avoids being too visually technological and deviating from the theme of intangible cultural heritage itself. With the help of virtualization, scenarialization, interaction and other methods, it changes the solid-state display method of intangible cultural heritage, innovates the narrative style of exhibition, and breaks the original diaphragm of traditional exhibition methods of intangible cultural heritage. Through in-depth emotional design processing, visitors can complete the information cognition and meaning construction of intangible cultural heritage, and finally achieve emotional sublimation.

Visitor Emotional Data Optimization

Artificial intelligence is based on big data, and the data resources and the ability to collect knowledge determine the height and accuracy of artificial intelligence. Artificial intelligence based on big data can effectively stimulate the emotions of visitors and meet their emotional needs for display content. At present, intangible cultural heritage display design lacks practical experience and in-depth analysis of visitors' psychology, and designers ignore the importance of emotion to the audience's cognitive depth and the quality of information exchange.

Artificial intelligence-based algorithms give emotion recognition the ability to continuously adjust parameters and self-optimize to achieve a better user experience. According to the cognitive characteristics of visitors, combined with situational design, handicraft teaching services that interact with agents can be increased to promote visitors' enthusiasm for exploring traditional handicrafts. For example, in the demonstration of purple sand pottery production skills in Yixing, artificial intelligence can collect the movement posture and technical Angle data of the experiencer equipped with wearable devices, and compare it with the standard production data of non-genetic bearers in the database to correct the shortcomings of the experiencer in real time. The whole process seems to be the one-to-one teaching guidance of non-genetic inheritors, providing comfortable and pleasant customized services for audiences of different ages and different needs, so as to stimulate the exploration and speculation of traditional skills. It should be noted that the collection of emotional data almost runs through the whole process of non-body examination. First, any collection of visitor identity data should be carried out in the initial state of interaction to avoid interruption during subsequent experiences. Secondly, in the operation process, visitors should feel the fluency of data collection, and will not be affected by movement and noise. Finally, the data identification results should not be fed back after the experience, but the responses should be made in the interaction process, so that visitors can focus on the experience itself and stimulate their emotions more effectively.

Anthropomorphic Interaction of Virtual Inheritors

Anthropomorphism is an effective way of emotional design, which provides a new idea for emotional display design of intangible cultural heritage by constructing personified images and people to convey various feelings. China is a traditional agricultural country. Although the idea of "building a nation on agriculture" promoted the development of handicrafts in the early stage, it also made most of the non-genetic descendants live in remote rural areas for a long time, making it difficult to spread traditional culture. Using artificial intelligence to play the role of anthropomorphic communication subject can not only ensure the normal production and life of inheritors, but also ensure the efficiency of display.

Artificial intelligence is pushing the traditional sense of "people" to be replaced by "things" as the subject of communication and direct transmission of information. Smart devices are not only communication media but also communication objects, and the concept of digital cultural subjects is actually applied to real scenes. On the one hand, artificial intelligence has a strong advantage over humans in terms of learning efficiency and logical ordering. Artificial intelligence can master a large amount of raw data in a short time, connect the disorganized data in series, and flexibly change the knowledge output mode according to the specific needs of audiences in different cultural environments. On the other hand, artificial intelligence has outstanding advantages in breaking through the barriers of understanding different languages. For languages and cultures with strong regional colors, artificial intelligence realizes smooth translation and communication in various contexts through language understanding and self-reasoning. Take the "Dunhuang Xiaoice" intelligent narrator as an example, using the data provided by Dunhuang Academy and the self-learning technology launched by Microsoft Research Asia to respond instantly, to provide users with relevant answers. Compared with the previous relatively fixed and rigid method of selecting sentence answers from structured documents based on retrieval and ordering, Dunhuang Xiaoice relies on learning to understand natural semantics, instantly sums up and outputs massive materials, and communicates with visitors more flexibly, making visitors feel intimate and intimate. Therefore, virtual inheritors based on anthropomorphism are applied to the intangible cultural heritage display design to achieve the construction of emotional meaning in the interaction with visitors, and strengthen the understanding and perception of visitors to the intangible cultural heritage.

Moreover, AI has generated a new direction for emotional intelligence in the third wave of development, cognitive intelligence. The ultimate goal of affective interaction is to enable the computer to understand the human emotional state using various perceptual methods, and make reasonable adjustments to comply with the emotional migration of users. Applied to the exhibition scene, "virtual inheritors" capture visitors' physiological information to understand their needs through emotion recognition technology, and carry out personalized and progressive interaction. Equipped with emotional intelligence, visitors' emotional analysis can be more flexibly generated by integrated thinking, so as to understand their experience habits point-to-point. Anthropomorphic "virtual inheritors" promote visitors to participate in practical activities through intelligent care services to realize the transmission of intangible cultural heritage value.

(1) Heuristic co-creation of intangible cultural heritage works

Heuristic experience emphasizes the ambiguity of the outcome during the interaction. The inspiration of creative behavior can give full play to visitors' subjectivity and independently create their own understanding of intangible cultural heritage works. With the continuous progress of industrial production, a variety of commodities emerge in an endless stream, and the decreasing practical value of intangible cultural heritage and its strong regional style bring visitors a shallow emotional feeling. Song Yingxing said in "Tiangong Kaiwu" that the design of creation should be "effective between daily use", and the core of traditional craft protection is to let it return to folk life. The human-machine co-creation of intangible cultural heritage works by means of intelligent means can revive ancient culture in modern times.

For example, in the Jinshan Farmers Exhibition Hall of Shanghai CIIF in 2019, Tongji Artificial Intelligence Laboratory realizes a variety of painting functions through Tezign.EYE deep learning technology. When visitors draw stick figures of different styles on the screen, Tezign.EYE can create again on this basis and generate a personalized Jinshan farmers painting in one second. And provide download and save functions.

For example, in 2020, Dunhuang Museum launched a wechat mini program "Cloud Tour Dunhuang", with many built-in mini-games for human-computer co-creation of works, such as users can use Dunhuang elements and specific symbols to customize personalized Dunhuang silk scarves; Free play to create gorgeous Dunhuang murals, fill in the color for the murals; Personally choose to participate in the interpretation of Dunhuang stories and voice the characters. In this process, complex process technology is transformed and hidden under the blessing of artificial intelligence, weakening the complexity of technology and adding interest to practice. The intervention of heuristic interactive experience makes the subjective and personal aspect of emotion become an opportunity to appreciate art. Visitors have the opportunity to change from passively accepting text content to actively creating works that unify truth, goodness and beauty, forming a good atmosphere of intimacy, equality and familiarity between works and visitors, allowing visitors to see their value for the contemporary and future, and truly achieving the purpose of promoting intangible cultural heritage among the public.

To sum up, intangible cultural heritage is an inseparable part of the Chinese nation. It is an important carrier of customs and lifestyles rarely seen in the world. It bears witness to the Chinese nation's long-standing creative thoughts and enthusiasm for secular life. Therefore, it is very important to display intangible cultural heritage with The Times and let the public establish a long-term emotional connection with it. The essence of education is to inherit and regenerate culture through the cultural process. Therefore, under the background of the increasing popularization of school education, school education should become an important way to inherit intangible cultural heritage. Only through the active participation of schools, especially university education, and the joint efforts of university professors, scholars and students, can the cultural heritage be passed on. Ecological construction of national intangible cultural heritage education inheritance system, make it harmonious active in the university education ecosystem, the essence of intangible cultural heritage adaptation, inheritance and innovation can be vividly demonstrated and realized. Therefore, it is particularly important to explore the impact of Chinese Tianjin college students' emotional responses to visual arts intangible cultural heritage on their participation, and to explore effective strategies to enhance students' emotional responses and classroom participation.

Acknowledgements

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