

Construction of Intelligent Information Exchange Platform for Cultural and Creative Industry Based on Cloud Computing

Jing Zhang^{1,2}

¹School of Language and Culture, Graduate University of Mongolia, Ulaanbaatar, Mongolia

²School of Art and Design, Modern College of Northwest University, Xi'an, China

Email address:

zhangjingsjs@163.com

To cite this article:

Jing Zhang. Construction of Intelligent Information Exchange Platform for Cultural and Creative Industry Based on Cloud Computing. *Humanities and Social Sciences*. Vol. 10, No. 3, 2022, pp. 113-117. doi: 10.11648/j.hss.20221003.12

Received: April 16, 2022; Accepted: May 17, 2022; Published: May 19, 2022

Abstract: The main task and purpose of information exchange platform construction is to comprehensively build an intelligent, competitive and large-scale technology transfer innovative information exchange ecological platform system based on cloud computing, and to actively promote economic efficient and high-quality development based on the artistic and aesthetic advantages of the cultural and creative industry. Digital information, cloud computing, large-scale space, time-travel, intelligent thinking, advanced technology and big data analysis are covering more and more media in the iterative advancement of cultural and creative industry, gradually increasing the audience's intelligent and immersive virtual experience effect. Intelligent communication platform design of cloud computing visual elements has been an important element of cultural and creative industry creation in recent years. Based on the iterative innovative design of cloud computing visual cultural elements, this paper analyzes the current situation and development of cultural and creative industry relying on new media interaction design from three perspectives of "intelligence", "experience" and "interaction". It proposes the design framework of flexible intelligent progressive experience and communication platform, focuses on the analysis of the innovative and integrated expression of cloud computing visual element technology and art, and encourages the audience to actively participate in the interaction design and construction of cultural and creative industries from the perspective of art cognition. Further realize the intelligent "cloud" media to collect information, analyze data and exchange feedback, so as to provide flexible, high adaptability, high interoperability of contact-free intelligent man-machine communication platform, art cognitive communication platform and humanized interactive services.

Keywords: Cloud Computing, Cultural Creativity, Communication Platform, Intelligent Elements

1. Introduction

In recent years, with the continuous development of digitization, cloud computing, diversification of the collision of art, cultural creative industries and the construction of art exchange platform, a very big problem of the current is the bottleneck of cultural information resources sharing across media, especially the large capacity information design characteristics under the influence of the cultural system in many countries. Many intelligent languages or cultures and arts are not efficiently shared, resulting in information confusion. For this problem, on the one hand, to perfect the local laws and regulations, from the institutional safeguard

information resource sharing "laws", on the other hand to take advantage of scientific and technological innovation, break the barrier of the administrative information, set up to encourage and facilitate the local art and culture product information sharing platform, information connectivity between different business, organization, coordination. Currently, among the existing research results, there are some studies on the realization of information collection and feedback exchange by robots to provide highly adaptable contactless human-machine voice interaction services [1], but there are few studies on the integration of culture and art from the perspective of industrial development. Based on the communication habits of contemporary college students, new

ideas have been put forward in establishing a communication platform with digital background [2], but there is a lack of artistic cognition in intelligent data research. Scientific and technological information is the core strategic resource of national independent innovation. Although the construction, management and development of scientific and technological information resources in China have achieved good results and development in recent years, there are still many deficiencies [3]. Mass scientific data is the core support for the development of scientific and technological innovation and the transformation of industrialization. At present, comprehensive studies have been conducted on the basis of in-depth exploration of the advantages and problems of the transfer of scientific and technological knowledge and achievements empowered by data elements [4], but their achievements need to be innovatively transformed into intelligent interaction of cultural and creative industries.

"Cloud" is the concept of cloud computing service has been deeply rooted in the hearts of the people in many fields, and used in the field of design is relatively small, even just beginning, but with the "cloud" at any time, at any time extension, on-demand, according to the advantages of paying, various of culture creative industry information exchange platform construction plays an important role. Moreover, it has a forward-looking guiding significance for the form design of the communication platform for artistic and creative products [5]. Making full use of the high-tech technology of "cloud" to express and improve the communication platform for artistic and creative products is one of the appeals of this project [6]. It is hoped that "cloud" design not only reflects technology in visual language, but also embodies art and design culture. The continuous innovation of the art exchange platform is to build a regional art exchange platform and establish a new cultural name card. It is hoped that the city culture of various countries can be improved to an artistic point of view, and the new brand impression can be built with the full use of the Internet, the technical support of big data and the aesthetic needs of art.

2. Context Analysis of Cloud Computing Technology for Cultural and Creative Industry Exchange Platform

The art exchange platform for cultural and creative industries is a high-tech construction, involving many cutting-edge technologies [7], including 5G, AR, VR, MR, BIG DATA, cloud computing, intelligent terminal, block chain technology, etc. The art exchange platform of cultural and creative industry, which integrates new technology and traditional culture and art, makes people interact and contact with works gradually come out, such as: In terms of virtual experience of cultural and artistic innovation and inheritance, traditional cultural story scenes are brought into mode, historical characters are experienced personally, traditional cultural elements in cultural creative industry are recreated, historical and cultural buildings are restored virtually, etc. In

terms of technological innovation, VR's cultural and creative industry design visualization, AR platform character interaction virtualization; The application results of the integration of cutting-edge science and technology and traditional culture and art in the cultural creative industry are constantly updated, which greatly deepens people's understanding of the development direction of new cultural and creative products and art exchange platform construction.

The construction of cultural and creative industry communication platform in the context of cloud computing research branches, including data platform, data collection, data management, communication forms, derivative products and brand creation design practice research, etc. [8]. Through long-term research to create more effective, more innovative, more meaningful and more creative research on the form of cultural and creative industry art exchange platform from the perspective of cloud computing, so as to further improve the future human social exchanges and communication, and promote the further development of human civilization.

3. Characteristics of Intelligent Creative Elements of Cultural and Creative Industry Exchange Platform

Driven by the innovation of economic globalization and cloud computing technology, the mining and development of intelligent elements in cultural and creative industries should conform to national conditions, keep pace with The Times and have the characteristics of The Times [9]. The essence of cultural and creative industries in a real sense is the art and culture that removes the dross and takes the essence and then vigorously promotes it for the audience. Whether it is in the myths and legends that encapsulate the wisdom of the world, or in the development of economy, culture and art over the past thousands of years, cultures of different countries have been imparted with their unique charm in the process of being proposed and passed down. Thanks to rich historical and cultural connotations and huge space for creativity and innovation, Under the impetus of economic globalization, the cultural elements feature of the construction of the art exchange platform of cultural and creative industry can become a good carrier of intelligent elements and creative economy.

Symbol, form, language, attitude, behavior and cultural position, spiritual pursuit and interactive process performance can constitute the cultural creative industries in cloud computing data form art exchange platform construction of intelligent elements, through the physical, with quality, efficient and innovative carrier, can the cultural differences in the cultural creative industry art exchange platform based on take its "shape", It extends its "meaning" in the understanding of cultural meaning, expresses its "affection" in information exchange, and finally spreads its "god" in the art exchange platform of regional cultural and creative industry. Cultural elements such as the cultural characteristics, traditional characteristics and living habits of

various countries and nationalities appear in their unique forms. For example, dougong is a very characteristic structure of Chinese architecture, and many regional cultural and creative products will extract the artistic elements of "dougong", so as to strengthen the aesthetic sense of the structural form of dougong in the design, and weaken the use function of dougong in a certain aspect.

Only with a convenient and practical art exchange platform for cultural and creative industries can these cultural and creative industries have more extensive communication and communication channels [10]. Contemporary artists continue to create art communication platforms with modern consciousness and high-tech application. Through the ideological transformation of contemporary artists, the ideological connotation and cultural connotations of these art design works are transferred to a higher level through the communication platform, making it easier for the public to accept a variety of art languages. Again such as product design, and household environment, clothing accessories, such as visual expression, art appreciation in the art exchange platform, based on cloud computing using concise communication language, extract the distinct strong artistic features, artistic elements and design concept, with the localization of the art communication platform construction and into a new stage, to be able to offer fresh blood to the development of modern design. Through the characteristic art language expression of the art exchange platform of cultural creative industry, modern design is endowed with new visual image and cultural connotation, so as to realize the intelligent communication and cross-media sharing of regional art and culture [11].

4. Brand Symbol of Cultural and Creative Industry

What the audience can succinctly, intuitively and clearly interpret is the brand symbol impression of cultural and creative industry. In cultural creative industry brand elements and symbols on the shaping of should be based on the national cultural background, to audience demand as a starting point, the efficient use of the product as relying on point, in the public aesthetic as an opportunity to think, to establish and improve the awareness of the cultural creative industry brand and wide-area degrees, also need to improve the cultural creative industry in the transmission of ideas and associate degrees, Cultivate audience's freshness and loyalty in the interactive experience of art exchange platform of cultural and creative industry.

- (1) To shape the brand symbol of the art exchange platform, it is necessary to do in-depth research on culture and precise positioning of the brand in all directions. With the continuous development of science and technology, the mass transfer of information and continuous innovation of technology, the art exchange platform can never leave the core of traditional culture;
- (2) The existing regional cultural elements of cultural

creative brands should be distinguished, summarized, sorted out and refined, and the most representative cultural symbol elements should be carefully refined to fully show the cultural characteristics of various countries to the audience, so as to provide a large number of resources for the construction of cultural creative industry art exchange platform;

- (3) Establish the brand awareness of the audience, effectively combine the characteristic cultural elements, brand symbol image, product gene chain and key traditional culture, and creatively recreate the art exchange platform of cultural creative industry;
- (4) While the audience uses and feeds back the brand effect, the series design of cultural and creative industry should be strengthened, and new media means should be used for key promotion. For example, the design of Chow Sang Sang jewelry brand creatively takes cultural blessing as the starting point, and extracts traditional Chinese cultural elements such as animals, scriptures, buildings and plants in the design to convey the meaning of auspice, happiness, completeness, peace and companionship to the audience.

Only the background, connotation and form of the traditional culture, in-depth excavation and intelligent processing step by step to do a good job art communication platform for the construction of the cultural creativity industry, the final results will not only accord with the aesthetic value of modern society, but also meet the demand of increasingly prosperous life, more to the spread of culture positive energy. A culture creative industry art communication platform to attract eyeball, entertain, win the market, cultural connotation and the creative is not enough, in the process of formation, also need to "local", "interactive", "innovative" and "intelligent" and "experiential" means to achieve the design of the cultural creative transformation. This requires an interactive intelligent system consisting of regional culture, interactive creativity, experiential design and unique content products that permeate and influence each other.

5. Construction Methods of Art Exchange Platforms for Cultural and Creative Industries

Relying on the cloud computing platform, using statistics, adoption, collection, classified management, comparative analysis of similar cases and other methods, By means of digital culture network, digital information platform from region to region, the regional center art cultural information sharing project of network resources, the existing media form of contrast, residents leisure well-off index, regional consumption level, the district development present situation, the Internet data statistics of broadcasting and television, cultural relics, data statistics, archaeological information and other data mining analysis, From these aspects, the cloud computing data form database [12] is established to conduct a preliminary test on the implementation effect of the sharing

project of art, culture and creative industry, so as to provide a resource basis for further research on intelligent elements. Resources are the "core blood" for the operation of the information sharing project of the art and cultural creative industry. The information sharing of the art and cultural creative industry should take content as the king and technology as the root, so that the art and cultural creative industry can achieve efficient and energy-saving information transmission through cloud computing and intelligent advantages [13].

The information platform of the art and cultural creative industry needs to build a closed-loop information flow system of "information collection -- collation -- construction -- art comparison -- information transfer -- intelligent optimization -- cultural service -- information feedback --

platform design -- data analysis -- art appreciation -- further sublimation and construction" (as shown in table 1). Art culture creative industry the implementation of the information sharing platform project pay more attention to keep pace with The Times, combining with the local culture, economic and political background effectively data platform construction, emphasizes the "adjust measures to local conditions", the characteristics of cultural development at the same time, the corresponding artistic culture creative industry information platform sharing engineering training work also with differences between the local features and the difficulty, Therefore, researchers are required to comprehensively analyze data and resources, overcome the difficulties of information barriers, and build a unique information platform for the creative industry of art and culture.

Table 1. Construction of information platform for art, culture and creative industry.

The early build	Medium build	The late build	Iterative upgrade
Information collection	Comparison of art	Platform design	Information feedback
Information collation	Information Transmission	Data Analysis	Sublimation construction
Platform architecture	Cultural Services	Art Appreciation	Data testing

In view of the influencing factors of the construction of the information platform sharing project of the art and cultural creative industry, combined with relevant theories and requirements of the construction of modern public art and cultural service system, and referring to similar excellent projects at home and abroad, strategic platform design is made for the sustainable development of the sharing project [14]. According to the proportion of "construction" and "application", the construction process of this sharing project is divided into four stages: resource information integration, preliminary exploration of platform construction, universal transmission and development, and platform consolidation and promotion. In the construction process, the design of art and cultural resource system should reach the unified standards first. Through the relevant government departments to formulate a perfect system to make the art and cultural creative industry information platform construction system design to achieve a systematic and comprehensive, and then make full use of the development of high-tech, new technology to develop adapted art and cultural creative industry information technology platform, And build multivariate, efficient, green, large capacity, human nature, comprehensive system, there are rules to follow, the environmental protection service terminal [15], the last is the art of through diversification, multidimensional propaganda, culture, education and other activities with multiple measures of information sharing platform project promotion service design with local characteristics, So as to achieve the goal of people-oriented, service to people.

6. Conclusion

In the global culture, cloud computing technology mature stage, "Chinese elements", "China's spirit" escalating, Chinese traditional culture on the form of expression, has the

diversity of numerous and complicated, interactivity, variability, can be stored, easy to identify, easy retrieval and easy replication, art exchange without resources construction and the optimization of intelligent elements, The construction of digital resources is the core of art exchange platform, and its quality directly determines the effectiveness of platform operation. To create a more dynamic, more relaxed and more intelligent way of digital interaction is one of the objectives of the construction of art exchange platform for cultural and creative industry. I will be in the teaching and research projects in the future based on cloud computing, smart technology background of cultural creative industry art exchange platform, intensive research, hope to design using these new features will inspire more people to common development and improve the design career, so that we are in the special society healthy and orderly development, steady progress, relaxed and happy.

Acknowledgements

This paper is the phased research result of Xi 'an Social Science Planning Fund project of 2021 "Multi-mode Construction of Iterative Interactive Packaging for Cultural and Creative Products in Xi 'an" (project no.: YS30), project leader.

References

- [1] Song He, Wei Huang, Xiyao Wu, Zenghao Zhou, Dongze Yang, Design of Intelligent Voice Interactive Robot based on Cloud Platform, Software Engineering, 201, 24 (04).
- [2] Yanrong Bao, Jiahui Wu, Yixin Rao, Haiyuan Zhang, Erjiang Ma, A Study on Internet Information Sharing Platform based on Campus -- A Case study of yunzhi Island Innovation and Entrepreneurship Project, Shanxi Youth. 2022, (07).

- [3] Sun Jianjun, Building a New Ecology of Science and Technology Information Firmly Grasp the Initiative of National Science and Technology Development, Books and Information. 2021, (06).
- [4] Zou Shujun, Construction of Technology Information Exchange and Technology Transfer Platform based on Data Elements, Books and Information, 2021, (06).
- [5] Yan Pengfei, Li June, Zhou Bin, Li Fuyang, Shen Jian, Peng Qi, Geng Li, Research on Network Communication Visualization method of Intelligent Substation Based on Power Graphic Description Specification, Intelligent Power, 2019, 48 (08).
- [6] Xu Chen, Hongyu Xu, Rongbin Yang, Thinking on High-end Communication Platform of Science and Technology Information Based on Content, Platform and Paradigm, Digital Library Forum, 2021, (10).
- [7] Jia Wang, The Frontier of Intelligent Cultural Innovation development, Chengdu Daily, Local level, 2022-04-21.
- [8] Hu Jianping, Functional Design Guide of Regional National Health Information Platform, People's Medical Publishing House, 2018.
- [9] Xiao Liang, Ke Tongping, Adoption Model of Internet Logistics Information Platform from the Perspective of Government Intervention: An Empirical Study Based on National Transportation Logistics Public Information Platform, Economic Science Press, December 2017.
- [10] Junxing Gao, Bo Zhang, Junxing Gao, Jun Luo, Analysis of International Cloud Computing Security Technology Research Project, Journal of Jilin University (Information Science Edition), 2022-04-12.
- [11] Yan Qiao, Tong Zhen, Zhihui Li, Research on Grain Informatization Based on Edge Computing, Journal of China Cereals and Oils, 2022-03-25.
- [12] Chao Sun, Marine Navigation Information Service Platform Based on Cloud Computing Virtualization Technology, Ship Science and Technology, 202, 44 (06).
- [13] Liqiang Zhang, Jianrong Lv, Fei Yan, Yunfei Xiong, A Review of Trusted Cloud Computing, Journal of Zhengzhou University (Natural Science edition), 2022-03-15.
- [14] Yisheng Su, Tinghui Zhou, Weisheng Zheng, Ligang Zhao, Hongyue Zhen, Guanbiao Huang, Construction of Power System Computing And Analysis Platform Based on Cloud Computing sharing, China Southern Power Grid Technology, 2022-03-14.
- [15] Hua Yun, Wang Qing, Research on digital Transformation Path of medical science journal editors based on Cloud Computing in the Era of Fusion media, China Media Technology, 2022, (01).