Research on Landscape Design Based on Ice and Snow Environment with the Computer aided Technology

Siyuan Li\textsuperscript{1,*}, Jian Huang\textsuperscript{1}

\textsuperscript{1}Heihe University, Heihe, China, 164300

*Corresponding author email: 26410280@hhxhy.edu.cn

Abstract. With the rapid development of socialist market economy, people's material life is increasingly rich, which will increase people's demand for spiritual culture. Ice sculpture and snow sculpture are important landscapes in Northeast China, which have formed their own unique culture. Therefore, we need to study the ice and snow (hereinafter referred to as IAS) landscape design, which will get the attention of relevant units. With the rapid development of landscape design industry, landscape design based on IAS environment has become an important human custom to highlight the simplicity and enthusiasm of northern people. Firstly, this paper analyzes the origin of IAS landscape. Then, this paper analyzes the basic characteristics of IAS landscape. Finally, some suggestions are put forward.

Keywords: Computer Aided Technology, College Counselors, Iap, Work Method Innovation

1. Introduction

There are a lot of IAS gathering in northern China, which creates a kind of IAS environment in northern China. With the increasing enrichment of people's material life, people's demand for spiritual culture is gradually increasing. Based on the IAS environment, the northern region can carry out detailed landscape design, such as ice sculpture, snow sculpture, etc., which has formed a special IAS culture. In daily life, northerners can use IAS to freeze food, which provides development support for China's transportation industry and quick freezing industry. In the development of landscape, the famous IAS carving culture has been formed in Northeast China, which is a new IAS culture with inheritance value. The IAS landscape design adds many colors to the northern culture, which carries the hope and spiritual sustenance of the working people. At present, IAS sculpture landscape design has become a more popular landscape design mode, which provides a lot of colors for Northern tourism. Taking Harbin IAS carving as an example, Harbin has formed an artistic landscape dominated by IAS culture, such as IAS art, IAS education, IAS tourism.

2. Development of landscape design based on IAS environment

2.1. The origin of ice snow landscape

Chinese IAS landscape design originated from Harbin Ice Lantern garden fair in 1963. After continuous development, China has formed the IAS culture with Chinese characteristics represented by Harbin IAS world. Therefore, China has formed a snow and Ice Festival, such as IAS tourism, IAS culture, IAS sculpture, IAS landscape, IAS entertainment, IAS sports, which attracts IAS enthusiasts from all over the world. IAS
landscape is an important culture in northern China. It is an atmosphere with IAS as the main body, such as making ice houses, ice flowers and ice lanterns. In 1963, Harbin held the first IAS lamp landscape garden fair, which was the first landscape activity with the help of IAS elements. Through the IAS landscape, we have enriched the spiritual and cultural life of the people in the northern region. In 1985, Harbin held the international IAS festival for the first time, which attracted more foreign tourists and promoted the healthy development of tourism industry.

2.2. Development of ice snow landscape sculpture
In the current social environment, people have a high demand for winter tourism projects. In severe cold areas, IAS resources are very rich, which has become the basis of IAS landscape. Ice snow landscape is a kind of diversified landscape that integrates entertainment, aesthetics and participation, which is one of the important factors to promote the rapid development of tourism industry in Northeast China. Through the IAS landscape sculpture, the northern region has led to the great development of art, humanities, commerce and many other aspects. With the prosperity of IAS culture in the world, IAS entertainment and IAS tourism are developing vigorously all over the world. IAS landscape sculpture has distinct ecological consciousness and environmental characteristics, which is an ecological green art form with serving people as the core. Therefore, the IAS landscape design is loved by the government, environmentalists and artists, which has become a street art form. IAS landscape sculpture has become an important part of urban IAS characteristic public landscape, which reflects the connotation of Humanities and art in the park. In the large-scale ice snow landscape experience Park, the IAS landscape sculpture and a variety of IAS subjects jointly construct the IAS experience area, including large-scale IAS buildings, IAS entertainment structures, IAS facilities, IAS multimedia image technology, etc.

3. Basic characteristics of ice snow landscape
IAS landscape design has many basic characteristics, as shown in Figure 1.

![Basic characteristics of ice snow landscape](image)

**Figure 1.** The advantages of work based on computer aided technology

3.1. Regionalism
One of the important characteristics of ice snow landscape is regional, which must consider the climate conditions. Through the two design languages of IAS, we can make full use of and express the shape of IAS, which is inseparable from the bearing of IAS environment. The IAS landscape needs the regional characteristics of the cold region, which needs the interactive experience between the IAS landscape and the residents. The continuous interaction between residents and ice snow landscape will promote the change of ice snow landscape, which requires continuous adjustment of its structure and form. By adapting to the changes of external environment, IAS landscape design can constantly coordinate human behavior and external environment changes.

3.2. Diversity
IAS landscape design is based on the IAS ecological environment, which will create a unique way of life with IAS symbols. Therefore, the theme of IAS landscape reflects the characteristics of diversity, which can
show the charm of IAS landscape. By absorbing cultural and classical elements into the works. IAS landscape design can create a specific theme of space and environment, which will better perceive the cultural connotation of IAS landscape. Through the overall layout and landscape design, we can give the IAS landscape diversity cultural connotation, which will ensure the maximization of the IAS landscape function.

3.3. Human nature
We must combine the observability and practicability of IAS landscape, which will have better use function and aesthetic function. Through the IAS landscape, we can give people a comfortable and beautiful sensory effect, which will reflect the people-oriented design purpose. Through people-oriented, we can timely feedback the user's environment, which requires us to consider the constraints of internal and external environmental factors. Through the open internal and external environment, we can collect, sort out and feedback behavior information, which will better serve the crowd and achieve the goal of people-oriented.

4. Countermeasures for innovation of IAS landscape design in Northeast China

4.1. Increase residents' Participation
The IAS landscape is built by the government or enterprises, which will reduce the public participation in the IAS landscape. Some foreign countries also have a lot of IAS resources, which will actively participate in the construction and design of IAS landscape. Therefore, we should put forward that residents should actively participate in the construction and design of IAS landscape. Therefore, the government needs to actively promote the participation of residents, which will better complete the design and construction of IAS landscape. In this way, we can enhance the enthusiasm and participation of residents in the IAS landscape design.

4.2. Balance the regional distribution
We need to balance the IAS landscape in Northeast China, which needs to form waterfront landscape area according to its own characteristics. By balancing the regional distribution, we can promote the construction of regional landscape, which needs to be in accordance with the development advantages of local IAS resources. By building local development features, we can enhance our attractiveness.

4.3. Creating brand image of ice snow landscape
The beauty of landscape image is the aesthetic feeling of the spatial form of natural landscape and human landscape, which has become an important factor to show the charm of the city. The traditional ornamental IAS landscape is not enough to attract people's attention, we should shape the brand image of IAS landscape. First, we should mobilize the active participation of the whole people. By playing the role of the whole people, we can create a brand culture of IAS that can be experienced and participated in the construction. Second, we should increase the regional characteristics of Harbin IAS landscape, which requires deep excavation of local culture. Therefore, we need to integrate the customs and culture into the IAS landscape construction details, which will enrich the artistry. Third, we should deeply explore the experience needs of different groups, which will strengthen the publicity of the city's popularity.

4.4. Optimize the participation and experience of tourists in an all-round way
Ice snow landscape is the brand characteristic of cold tourism, which needs to be defined from the perspective of public demand. By actively exploring the innovative development path of IAS, we can fully analyze the experiencer, the experience object and the perception factors that affect the experiencer. Through art, we can create a variety of environmental elements, which will stimulate the human body's various senses and satisfy people's IAS experience. In the design process, we should reduce the scale of the ornamental landscape. By relying on the natural landscape, we can increase the experience and participation of IAS landscape, which will meet the needs of tourists. At the same time, we can improve the quality of people's experience and participation, which will increase the experiencer's active experience. By building a comprehensive ice snow tourism destination with participation and experience, we can optimize the participation and experience of tourists in an all-round way.
4.5. **Strengthen support and pay attention to personnel training**

The local government should strengthen the guidance. By improving the relevant policies and systems, the local government can broaden the financing channels of enterprises, which will innovate the investment mode. Therefore, we can play a positive role in the injection of local capital and the optimization of industrial structure. In addition, the government should cooperate with universities to increase the training of professional talents. By encouraging colleges and universities to set up IAS related majors, a large number of skilled personnel can be trained to serve the development of IAS in northern China, which will speed up the improvement of talent security policy. By promoting the development of IAS, we can help the transformation and upgrading of IAS tourism industry, which will realize the sustainable development of IAS tourism economy.

5. **Conclusion**

We need to develop the IAS landscape in Northeast China according to the local development characteristics, which will form a famous brand of our own development. By increasing the participation of residents in Northeast China, we can balance the IAS landscape in different regions. Through the connection between landscape and urban infrastructure, we can effectively integrate relevant tea. Therefore, we need to develop the brand characteristics of IAS landscape in Northeast China, which will constitute the landscape system of Northeast China's own development characteristics.

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