NATIONAL MUSEUM OF SCOTLAND

Research on National Museums Scotland

Tour Experience Optimization
Focus on Different Ages

EAH - A02

Group Members
Chengcheng Yu | Chenying Liu | Guanlin Zhao | Jiayi Sun

SHOWCASE

BACKGROUND

The Animals section of the National Museum of Scotland is a very popular exhibit area, attracting many visitors and students. In this exhibit, you can learn about animal species, ecosystems and conservation efforts around the world.

The exhibition area displays taxidermy from different regions and time periods, including various species such as mammals, birds, reptiles and insects. You can see specimens of large animals such as lions, elephants, giraffes, penguins, etc., and you can also learn about some rare or endangered species.

In addition, the exhibition area also provides some interactive displays and activities, allowing visitors to have a deeper understanding of the characteristics and living habits of animals. You can participate in some simulation

FOUR DIFFERENT KINDS OF ANIMAL DIVISIONS

Mammal area
The area displays a variety of mammal specimens from around the world, including lions, elephants, giraffes, bears and more.

Bird Zone
The zone displays a variety of different types of birds, including small birds, water birds, flying birds, etc.

Reptile Zone
The zone exhibits various reptiles such as snakes, crocodiles, turtles and more. The exhibition includes life cycle, living habits and environmental adaptability.

Insect Zone
This zone displays insect specimens from all over the world, including butterflies, beetles, spiders, etc.

Status & issues

Visitors to the Scottish National Museum, like most museums, come from all age groups. Museums often have exhibits and programs designed to appeal to a wide range of ages and interests. This inclusivity allows people of all ages, from young children to seniors, to explore and learn about the natural history, culture, and science that the museum offers. Museums like the Scottish National Museum typically have interactive exhibits, educational programs, and displays that cater to the diverse interests and learning styles of their visitors.

The animal exhibits are too realistic, which may result in some children not being able to accept some of the more frightening images of animals.

Most of the exhibits in the museum are introduced by video and text, and the large text and video may be a bit boring to the visitors.

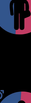
Crowd Analytics

Participants
N=123

CHILDREN GROUP

0-12Y

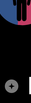
Children are the most active and curious group of people in a museum. Often endlessly curious and energetic, they are more inclined to interact and experience, and will actively participate in the various interactive exhibits and activities offered by museums. These interactions can stimulate their learning and help them understand the content of the displays more deeply.



TEENAGERS GROUP

12-18Y

Young people often show a deeper interest in learning and thinking in museums. They already have a certain knowledge base and thinking skills and are more willing to acquire knowledge through reading, discussion and in-depth exploration. Youth groups pay more attention to cultural, historical and artistic aspects in museums. They may spend more time carefully reading the explanations of exhibits and exploring the historical background and cultural connotations behind them.



ADULTS GROUP

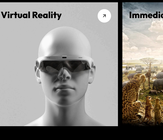
18Y+

Adults in museums usually focus more on the practicality and real-world application of their knowledge. They may focus on content related to their field of expertise or on topics that have a direct impact on their lives. Museums provide adults with an opportunity for continuous learning and self-improvement so that they can keep up with the development and changes in society.

Design Concept

Virtualized 3D display, anthropomorphic, immersive experience.

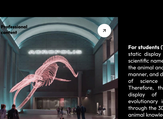
The experience optimization solution transforms static display of animal specimens or models into dynamic display of VR anthropomorphic 3D scenes. Through the virtual 3D display technology, the same exhibit is presented in different forms to different age groups. In this way, it presents a more vivid, realistic and interesting museum tour experience, attracting more tourists to visit.



Design Scheme

CONTENT VISUALIZATION

For visitors of adults (18Y+), the existing static model display is too boring, or cannot fully express the animal life scene. So through the construction of different VR virtual 3D scenes. For tourists to exhibit different animals and the different scenes of their lives, in the form of 3D virtual scenes for tourists to present a vivid museum animal scene display experience.



CONTENT ENRICHMENT

For students (12-18Y), we found that the existing static display only exhibits a static scene and scientific name, and does not show the details of the animal and the life scene in a comprehensive manner, and does not achieve the popularization of science and educational significance. Therefore, through the 3D anthropomorphic display of animal life scenes, including evolutionary information, bone structure, etc., through the 3D virtual visual all-round display of animal knowledge, to achieve the significance of museum display and education.

VISUAL INTERESTING

For the K12 age group (0-12Y), as children are still in the stage of cognition of the world, can not accept all types of animal images, such as more aggressive animal scenes or images, may make children feel fear, in addition, children's attraction will be more cartoonish, visualization of the visual attraction. Therefore, we will real display models through VR to present children with more cartoon, more intimate dynamic 3D visual image, for children to show the museum animal display experience belonging to children.

Reference List

Burke, G. et al. (2021) Drawing with Art-Well-Being: Intergenerational Co-Creation with Seniors, Children and the Living Museum. *The International journal of art & design education*. 40 (3), 630–654. doi:10.1111/jade.12372.

Hsu, T.-Y. and Liang, H.-Y. (2021) 'Museum engagement visits with a universal game-based blended museum learning service for different age groups', *Library Hi Tech*, 40(5), pp. 1229–1243. doi:10.1108/lht-08-2020-0198.

Vermeeren, A. et al. (2018) *Museum Experience Design: Crowds, Ecosystems and Novel Technologies*. Cham: Springer International Publishing AG.

National Museum of Scotland

Tour Experience Optimization
Focus on Different Ages

Group Members
Chengcheng Yu , Chenying Liu , Guanlin Zhao, Jiayi Sun