摘要

题目：中国江苏省震泽中学天文花园实用性功能的评价

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本论文研究目的是考察震泽中学天文花园的设计现状，考察使用者对震泽中学校天文花园实用性功能的满意程度与评价，提出震泽中学校天文花园实用性功能设计的建议，以 100 名随机使用者作为研究对象，使用文献分析法、问卷调查法、访谈法作为研究方法。用平均值与标准差分析，结果如下：

通过分析了解天文花园分为三大区域，听雨轩、观星台、文化展示长廊，设计符合学校办学理念，天文主题突出，景观布置、建筑风格、装饰元素等方面的设计，使天文花园彰显出学校的办学理念，但同时存在问题 1.缺乏无障碍设施 2.进入花园便利性低 3.花园整体性能弱 4.设施安全性差 5.花园空间管理差 6.建筑物的物理适用性低 7.景观植物适用性差，后续完善需从此入手。

通过分析数据得出，听雨轩区域整体满意度$\bar{x}$平均值为 3.21，S.D.平均值为 0.70，听雨轩区域整体满意度一般，需要从提高行人的舒适度和安全性、重新设计空间尺寸、增加个性化元素进行提

升，观星台区域整体满意度$\bar{x}$平均值为 3.69，S.D.平均值为 0.66，观星台区域满意度不高，需要从设施安全措施、环境清洁度、室内照明进行提升，文化展示长廊区域满意度$\bar{x}$平均值为3.53，S.D.平均值为 0.67，文化展示长廊区域整体满意度相对较高，需要从区域规划、设施设备、个性化功能进行提升，利用用户中心主义理论、人因工程理论、交互设计理论、社会心理学理论、服务设计理论，对天文花园进行评估，为后面提升策略提供参考。

通过对天文花园满意度问卷调查数据统计分析得出以上，问题后，针对性提出提升策略，从九个方面入手，1.“安全保障管理、安全防护设施设置”2.“道路的质量与安全”3.“设施的质量与安全”4.“配套设施的适宜性”5.“植物安全性”6.“学生教师参与的渠道”7.“交通的便捷性”8.“科普教育及宣传”9.“天文意境的营造”，为后续提升的不同阶段采取相应的举措进行合理科学的优化，以提升使用人群对于震泽中学的满意度。本研究充分证明了震泽中学天文有积极影响。

关键词：实用性功能，天文花园，震泽中学，功能评价

Abstract

Title： The Evaluation of Practical Functions of the Astronomical Garden of Zhenze Middle School in Jiangsu Province, China

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The purposes of this research were to examine the current design status of the astronomical garden in Zhenze Middle School, examine users' satisfaction and evaluate the practical functions of the astronomical garden in Zhenze Middle School, and put forward suggestions for the practical functional design of the astronomical garden in Zhenze Middle School. 100 people were randomized to be the research object, and the research methodology was done by literature analysis, a questionnaire survey, and an interview. The data were analyzed by using mean and standard deviation. The results were as follows:

Through analysis, it appears that the Astronomical Garden is divided into three major areas, namely the Tingyu Pavilion, the Star Observation Deck, and the Cultural Exhibition Corridor. The design is presented based on the school's educational philosophy, with prominent astronomical themes, landscape layout, architectural style, decorative elements, etc. However, the problems found that; 1.) Lack of barrier-free facilities 2.) Low convenience of entering the garden 3.) Weak overall performance of the garden 4.) Poor safety 5.) Poor garden space management 6.) Low physical suitability of the building, and 7.) Poor plant landscape. The improvements need to start from these points.

By analyzing the data, it can be concluded that the average overall satisfaction level in the Tingyuxuan area is 3.21, and the average S.D. is 0.70. The overall satisfaction level in the Tingyuxuan area is in the average level. It needs to improve

pedestrian comfort and safety, redesign the space size, and increase personalized elements. The average overall satisfaction in the observatory area is 3.69, and the S.D. average is 0.66. The satisfaction in the observatory area is not high. It needs to be improved in terms of facility safety measures, environmental cleanliness, indoor lighting, and cultural display. The average satisfaction level in the corridor area is 3.53, and the S.D. average is 0.67. The overall satisfaction level in the cultural exhibition corridor area is relatively high. It needs to be improved from regional planning, facilities and equipment, and personalized functions by using user-centered theory and human factors, engineering theory, interaction design theory, social psychology theory, and service design theory to evaluate the Astronomical Garden and provide a reference for subsequent improvement strategies.

Through the statistical analysis of the Astronomical Garden from the questionnaire data, the improvement strategies for nine aspects were as follows: 1.) security management, safety protection facility provision, 2.) Road quality and safety, 3.) Quality and safety of facilities, 4.) Suitability of supporting facilities 5.) Plant safety, 6.) Channels for students and teachers to participate,7.) Convenience of transportation, 8.) Science education and publicity and 9.) Creation of astronomical artistic conception. The above corresponding measurements should be used for reasonable and scientific optimization at different stages of subsequent improvement, and to improve the users' satisfaction with Zhenze Middle School. This study fully proves that astronomy in Zhenze Middle School has a positive impact.

Keywords: Practical functions, Astronomical Garden, Zhenze Middle School, functional evaluation