

A STUDY ON POST OCCUPANCY EVALUATION OF GARDEN LANDSCAPE OF THE RESIDENTIAL BUILDINGS IN KAOHSIUNG

Hsu-Fu CHANG

Associate Professor, Kao Yuan University Department of Architecture, Kao Yuan University, Taiwan

Shih-Chieh WU

Master, Kao Yuan University Department of Architecture, Kao Yuan University, Taiwan

Bin-Feng YAN

PhD Student, Graduate school of Architecture, NCKU, R.O.C., winds4040@gmail.com

Summary

This study investigated the relationship between the user and the environment, the object of study is the Taiwan Kaohsiung residential building atrium landscape. First understand the relevant literature, and by POE, identify the impact of the planning and facilities in the atrium of the evaluation factors, and finally establish atrium facilities and environmental quality assessment model. Questionnaires of users in the atrium of the frequency of use, satisfaction with emphasis, to view the landscape design of residential building atrium. The research results show that the highest score of the satisfaction of the atrium environment facilities factors: the physical environment, maintenance management, a clean environment, landscape planning, service facilities.

Keywords: Landscape, POE, Atrium, Taiwan Kaohsiung

1 Introduction

By beautify landscape in the atrium of the residential building construction company's packaging to improve the economic effect, did not consider the needs of the users, so causing inconvenience. This study evaluated the residential building atrium landscape in order to provide a better quality of living, understanding of the current user satisfaction for residential building atrium landscape.

The study compiled literature and POE theory, satisfaction with the relationship, to explore the different users and residential building atrium landscape to identify the impact of landscape planning factor in the atrium. The purpose of this study was to understand the current residential building atrium landscape design problems in the use of, final recommendations for improvement. The results of this study can be used as a reference of planners, managers and homebuyers, to enhance the quality of the environmental quality of the atrium.

2 Methods

2.1 Case Studies

Residential building of the data collected through case studies, the main objective is to understand the contents of the case location and landscape design of residential building atrium space, as questionnaire design reference.

2.2 Survey

The study through questionnaires and data analysis to understand the behavior of the people in the residential building atrium space. After the survey, the study used SPSS, statistical analysis, to obtain accurate values, in order to write a conclusion.

2.3 Post-Occupancy Evaluation

This study in order to understand the usage of the users of the residential building atrium space to collect Atrium planning fundamentals for the establishment of assessment content screening and evaluation indicators, the development of the assessment model.

3 Results

3.1 Assessment analysis of user characteristics

This study examined 130 people in residential building atrium space, the characteristics of the respondents, the number of women than men, aged from 18 to 25 years old, 26 to 35 years old (57.0 %), most unmarried, level of education to people with a university degree the largest number (55.4 %), career mostly in service industries, the residence time of less than 5 years (86.9 %), the average residence floors above the 10th floor, family members, mostly second-generation living under one roof (53.1 %), use of time to 19:00 after (46.8 %), the residence time in the 30 minutes or less engaged in the main activity is to rest and chat.

3.2 Residential building atrium space facilities

130 samples than satisfaction with emphasis, three assessment project is the most important people are the safety of the facilities, a clean environment, access control.

3.2.1 Physical Environment

The average score of the four evaluation factors are $3.35 \leq M < 4.19$ range, said residents of the atrium and Environmental satisfaction. Residents in the lowest part of the satisfaction of the noise, but the noise is one of the most important projects of the residents. If the voice of the atrium is too large, the administrator will stop the noise source may be passed surroundings or home. On the other hand, residents of the satisfaction of the ventilation effect, but for the satisfaction of the air quality is reduced.

3.2.2 Landscape Planning

The results showed that the five factor scores in the range of $3.35 \leq M < 4.19$, said residents satisfied atrium landscape planning. The lowest score of the evaluation factors trails security, green area and environmental coordination.

3.2.3 Service facilities

The results showed that six factors are average in $3.35 \leq M < 4.19$ within satisfactory, trash volume was ordinary. Chairs, lamps, flower bed facility has a good quality of construction, so the facility security satisfaction, while poor trash the quantity and location of satisfaction, the insufficient number of atrium setting trash and poor location.

3.2.4 Clean environment

Residents attach great importance to the project within six factors are average $3.35 \leq M < 4.19$. The lowest satisfaction the lawn clean environment management units should be improved in this regard. The residents of the most important projects is waste disposal, clean, neat amenity facilities, but on these items, the residents said that the current situation so that they are most dissatisfied with. Management units should be done to improve, improve the utilization of the atrium environment, and towards environmental health, health, comfort and quality.

3.2.5 Maintenance and management

The four average factor scores are $3.35 \leq M < 4.19$ range, said residents are satisfied with management units, relative residents attach great importance to this part. Residents access to community control quite satisfied with this aspect can be effective in ensuring the safety of the community, but not satisfied to stop with the processing of the illegal construction of the atrium, should be properly handled.

3.2.6 Analysis

130 questionnaires in the survey results, the facilities satisfaction is very average, the most satisfactory physical environment $M = 3.92$, maintenance and management $M = 3.90$, the environment clean $M = 3.86$, the most dissatisfied service facilities $M = 3.51$. Each building is very close to the average of the services for the atrium, display the residents view is consistent, the degree of satisfaction in sequence: the physical environment > maintenance management > environment clean > landscape planning > service facilities. This result is in line with the basic needs of the residents, atrium comfort, health, and safety.

The residents of the most important assessment factor the physical environment of $M = 4.47$, to maintenance management $M = 4.42$, the environment clean $M = 4.31$. The average of these three factors is $M \geq 4.19$. The residents do not attach importance factor is service facilities and landscape planning. Of great importance in sequence: the physical environment > Maintenance Management > Environmental cleaning > service facilities > Landscape Planning.

4 Conclusions

4.1 Physical Environment

The impact of the physical environment in addition to the type and size of the atrium configuration, should pay attention to the problems brought about by external factors. The number and location of the plant will affect the physical environment of the atrium that need attention, the plant not only beautiful, more other functions.

4.2 Landscape Planning

Trail quality will affect the safety and feel of the user, so the higher attention, therefore planning needs to be more consideration of the construction, quality, safer concessions Road. The residents are not satisfied with the Atrium greening ratio, and therefore recommended that the atrium greening ratio needs to be adjusted.

4.3 Service facilities

Service facilities, safety is very important, good planning is an important factor affecting the use of facilities. The research results show that the use of time after 19:00, so the lighting at night nocturnal users, it should be properly planned and regular maintenance.

4.4 Clean environment

The results show that the residents for the demanding environment and facilities management, the atrium management units should strengthen the facilities for cleaning, maintenance and management. The lawn should be regular maintenance, pleasant visual effect.

4.5 Maintenance and management

Residents of the most important access control, followed by management style and effectiveness, and deal with illegal construction. Management units should be established residential the atrium environmental assessment system, and the establishment of the behavior of the environment and use of atrium, the results of the assessment can make a good improvement strategy for the atrium.

References

- [1] Lin Hsien-Te, 2009 “Eco-Community Evaluation system in Taiwan.” CABC, Architecture and Building Research Institute, Ministry of the Interior.
- [2] Lin Hsien-Te, 2007 “Eco-Community Evaluation Microclimate.” Symposium urban micro-climate assessment:46.
- [3] Architecture and Building Research Institute, Ministry of the Interior, 2010 EEWH-EC 2010, Lin, Taipei.
- [4] Architecture and Building Research Institute, Ministry of the Interior, 2009 EEWH-NC 2009, Lin, Taipei.