Green library design and evaluation: the Taipei Public Library, Taiwan
Shu-hsien Tseng
Taipei Public Library; The Department of Library and Information Science, Fu-Jen Catholic University; and Graduate Institute of Library & Information Studies, National Taiwan Normal University, Taipei, Taiwan

Abstract
Purpose – The purpose of this paper is to introduce the planning and architectural design features, and the post-occupancy evaluation (POE) of the Beitou Branch Library in the Taipei Public Library System. This paper also proposes possible solutions in response to the public’s suggestions for improvements.

Design/methodology/approach – A library-user survey was employed to appraise the functioning of the Beitou Branch Library by the general public. The questionnaire for this survey was divided into three parts: background information of patrons; patrons’ use of the Beitou Branch Library; and patrons’ opinions on the facilities of the Beitou Branch Library. The 511 valid returned patron questionnaires were numbered and processed by means of Microsoft Excel statistical analysis. Chi-square testing, ANOVA and Pearson T-test were then used to analyze the relevant data and statistics.

Findings – The findings from the Beitou Branch Library survey are as follows: its innovative design and unique architecture and furniture has created a trend for new design concepts in Taiwan; it increases the number of library visits; it increases the visibility of the library and changes the stereotype of the library in the public’s mind; it embodies the principles of ecological education and has become a multi-faceted learning center; it has gained the support of local residents and professional experts; it has generated corporate sponsorship of green library buildings; and the average numbers and distribution of frequency indicate that, other than “convenient parking” and “number of computers in the computer area”, patrons were generally satisfied with the library’s facilities, with all other categories receiving an average rating of 3.5 or greater.

Originality/value – This paper provides details of the experience of Taipei Public Library in planning and designing a diamond class green library and may increase public libraries’ concerns about the issues of environmental protection and energy conservation.

Keywords Libraries, Library users, Surveys, Public libraries, Library buildings, Taiwan

Paper type Case study

Preface
In 2002, when a new branch library was planned for construction for the expansion of Taipei Public Library, the concept of green architecture was practically unknown to the general public in Taiwan. However, the new branch was designed with the concept and qualities of a green building clearly in mind, so that all aspects, including the structure, the materials, its electricity and mechanisms, and the furnishings of the new branch library would comply with the features and functions of self-sustaining management. It aimed to offer an inviting reading environment to the public and to put into practice the efforts and thoughts of sustaining the ecology of the earth. However, as the concept of green
architecture was just being introduced to the public in Taiwan with no existing model for such a library building, it was a daunting challenge to create a library that would meet all characteristics of a genuine green building. In the case of the Beitou Branch Library, there were even more difficulties to overcome. To name the most prominent, the foundation area for the library was not large enough; a stream flows right along the foundation; the site’s ground is rich in sulfur; numerous old and venerable trees surround the area, and, not least, the local residents opposed the building of the library (see Figure 1).

The Beitou Branch of the Taipei Public Library is the first green library building in Taiwan[1]. It was officially opened on November 17, 2006. Since then, it has received many positive reviews and attracted an endless stream of visitors. The library continues to be the recipient of numerous awards: in June 2007, it was given the Outstanding Environmental and Cultural Award of FIABCI Taiwan Real Estate Excellence Award 2007. It is Taiwan’s entry in the FIABCI Prix d’ Excellence Award 2008. On July 12 of 2007, it was designated as a diamond class green building, the first and only such designated site in Taiwan[2]. On August 22, it received the grand prize at the Quality and Innovation Awards of the Taipei City Government. On September 30, it received the Green Building Design Award of the Ministry of the Interior. On October 30, it received the grand prize at the Taiwan Architecture Award. On November 23, it received the first prize of the 6th Taipei Urban Landscape Award from Taipei City Government. On December 21, it received the Public Works Gold Medal Award from the Executive Yuan.

Not only does it meet all the requirements of a green building, the library building is an architectural gem with its unique structure, spatial design, and numerous facilities. All of these features have attracted countless visitors, and aroused an interest in many in the process itself of the design and construction of the library building, its present site and its Post-occupancy evaluation. This article examines these aspects of the library to serve as a frame of reference for specialists in the fields of library science and architecture field, and for those interested in the design and construction of green buildings.

A brief introduction to the Beitou Branch Library
Special features of its architectural design

The Beitou Branch Library consists of three levels, including the underground level. The total land area is 34,797.94 sq. m, the building itself takes up 802.87 sq. m, and the
The total floor area is 1989.61 sq. m. The library is divided into the following sections: the Children’s Reading Room, the Story-telling Area, and the Exhibition Area and Audio-Video Room are located on the underground level. The Information and General Service Desk, the Newspaper and Periodical Area, the Computer Data-base Area, and the General Reading Area are all located on the first floor. The second floor includes another General Reading Area, the Multi-function Discussion Room, as well as the library’s Local History and Special Collections. In addition, each level provides outdoor reading areas (Taipei Public Library, 2007a) (see Figure 2).

The library’s floor plan features patron-friendly and environment-friendly designs found throughout the building, which serve to create a cozy setting for reading. For the reader to feel at one with the outdoors when engaged in perusing library material, reading tables are situated by French windows on every floor to take full advantage of natural lighting (see Figure 3). Shelving, tables, and chairs are all made of wood (see Figure 4).

Three-shelf bookcases were adopted to provide an unimpeded indoor and outdoor view. Shelves and chairs in the Children’s Reading Room blend in with the overall structure of the building to create a natural and pleasant reading environment. Adjacent to the north side of the library is a lotus pond that bears the shape of Taiwan. The outdoor reading area here offers patrons a relaxing reading environment. The roof is of light material. Solar cells on the roof surface are used to generate electricity of up to 16 thousand watts (see Figure 5).

Shades and wooden lattices are used to limit the heating of the interior to cut down on the need for air-conditioning. The roof has been landscaped with a profusion of plants and a grassy slope capable of absorbing rainwater and channeling it to tanks for recycling (see Figure 6).

The recycled water can be used to water plants and flush toilets to minimize the waste of water resources. Recyclable wood and steel were selected as construction material for the building to reduce waste and limit the negative impact on the environment. For the same reasons, the wood used in the interior was treated to prevent termites and waterproofed. The paint is ecologically friendly, and unnecessary furnishings were eliminated (Taipei Public Library, 2007a).
Figure 3.
French windows are used to maximize illumination and improve convection

Figure 4.
Construction mainly uses steel materials

Notes: Rooftop utilizes lightweight wooden Ecoroofs; all interiors utilize lightweight calcium silicate walls, to reduce amount of construction materials, energy expenditure and carbon dioxide emission
The use of the library

The setting of the Beitou Branch Library merges with the grounds of the park and the adjacent natural landscape, attracting countless visitors to take a tour of the library or make use of the library’s facilities. According to a statistical study on various reading areas, ever since it opened its doors to the public, the library has been far more popular than any other branch of the public library system.

The average number of visitors, including readers who come to use the library, schoolteachers who bring their classes of students to the library, and those who are simply drawn by the design of the library building, is much higher than that of any other branch library. During the period from December 2006 to August 2007, the average number of visitors of the Beitou Branch Library was 42,954 per month, four times the number of other branch libraries, which averaged 8,963 visitors (System Administration Department of the Taipei Public Library, 2007).

The average number of borrowers for the Beitou Branch Library was 5,127 monthly for the period studied, which was significantly higher than the number of 3,193 for the other branch libraries (System Administration Department of the Taipei Public Library, 2007).

The library collection of the Beitou Branch Library numbers is a modest 35,000 volumes, yet the average number of books borrowed on a monthly basis is 17,812, a much higher figure than the average number of 11,018 for the other branch libraries (System Administration Department of the Taipei Public Library, 2007).
Figure 6.
A three-dimensional illustration of eco-friendly features at the Taipei Public Library, Beitou Branch.
Building the new Beitou Branch Library

The old Beitou Library opened on April 14, 1987. However, it was closed for an indeterminate amount of time on September 24, 1990 due to the discovery that sea sand had been used in its construction. The old library was eventually torn down on July 14, 2002, and the construction of a new library went into process (Taipei Public Library, 2007b). The Taipei Public Library expended a great deal of effort in the planning of the new library building.

The entire project of constructing the new Beitou Branch Library can be divided into two stages: planning; and designing and building.

The first stage: planning

In the first stage of planning, the main goal was to collect all the necessary data and information for the design and construction of the building. Four tasks were taken at this stage (Chang and Guo, 2002):

1. detailed discussion and communication with library staff and residents of the community to gather ideas and establish specific goals for the plan of constructing the library building;
2. collection and analysis of wide-ranging information and related data about the natural environment, the history of the community, relevant regulations and laws, materials, and the social environment to establish a thoroughgoing database for the reference of the designer;
3. establishing principles for the floor plan and the allotment of space and design as a reference for operations; and
4. proposal of a working budget, timetable, and operational plan as the foundation for the whole project.

The Zhang Ji-I Architectural Studio and the Guo Heng-cheng Architectural Firm were responsible for the first stage. On June 16, 2002, the selection of architects for the planning and design of the first stage was completed. A report on the preparatory stage was submitted in January 2003. The report comprised the following sections: Introduction; The Concept of the Green Building and the Planning of the Library; Summary and Analysis of the Nature of the Foundation; Analysis of Related Cases; Principles for the Spatial Plan and Design of the Library; Statement on Spatial Needs; Illustrations of the Design; and Budget and Timetable for Construction. A supplementary appendix included a survey, minutes of previous meetings, and information about the foundation (Chang and Guo, 2002). An important consideration at this stage of the planning was that the design of a green building is necessarily based on the interrelationship among people, the building, and the environment and the need to keep four key aspects in mind: space; time; activity; and psychology. As for space, the primary green principles are: small scale; localization; naturalization; and standardization. In terms of time, the four principles are: durable, adaptable, renewable and recyclable. For activity, there are also four principles: reduction, creation of community space, maximization, and optimization. The four principles for psychology are: health, comfort, beauty, and simplicity (Chang and Guo, 2002).

The second stage: submitting designs and bidding

After the report on the preparatory stage was submitted in January 2003, the next step was the selection of an architectural team in charge of construction, which began in
June of the same year. The Architects Chang Ching-hua and Kuo Yin-chao of the Bioarchitecture Formorsana were chosen through a rigorous selection process. Using the report of the first stage of planning as a guideline, the two architects proposed three themes and the strategies for working out the designs (Chang and Kuo, 2003):

(1) **Theme 1: How to merge the ecology of Beitou Park and the historical and cultural environment in a natural setting?** Strategies:
- nestle the building in the surrounding greenery to extend the energy and life of the park;
- extend the park into the interior space of the library, so that the reading areas become a virtual forest; and
- the environment is educational; the library is like a book that can be read in terms of the natural setting of Beitou District.

(2) **Theme 2: How to reinforce the major functions of the library and the interaction of books, people, and environment?** Strategies:
- simplify the management of the library to make it efficient and attract the public to visit the library;
- extend the space of the park into indoor areas to bring in knowledge of nature;
- the indoor space should be open and multi-functional with the north side facing the stream and the south side facing the park, so that there is no blind spot in management; and
- service areas should be together in one section to avoid disruption of other areas of the library.

(3) **Theme 3: How to reach the goal of sustained management of a green library?** Strategies:
- fulfill the nine indices of a green library;
- promote the use of wood structure that is low in energy consumption and creates a virtual forest in the indoor reading area;
- promote the use of green building materials and create an environment with diversified creations; and
- make distinct divisions between different areas and an install a varied energy system that reduces the consumption of electricity by 20 percent for air conditioning and lighting during the library’s operating hours.

In order to commission a public building for construction, the operations involving civil engineering, on the one hand, and engineering of water, electricity and air conditioning on the other, are usually commissioned separately. Moreover, there typically is no budget for the design of furniture. However, to ensure the overall quality of construction and avoid interface problems occurring during construction, the Taipei Public Library commissioned architects to design the floor plan, furniture, and all other facilities. In this case, the operations involving civil engineering, water and electricity engineering were grouped together. Civil engineering included the design of the interior decor and the furniture to make sure that the furniture is both beautiful in appearance and comfortable.
Post-occupancy evaluation of the practicality of the Beitou Branch Library

Post-occupancy evaluation (POE) of a building means examining it systematically according to pre-established goals of the library and seeing that it is capable of meeting the demands and needs of users for an extended period of time. POE provides valuable feedback for the library administrators to take into account and clarifies the effective use of space and any need to modify the original design (Lackney and Zajfen, 2005). The Research and Development Unit of the Central Library proceeded with an objective and informed appraisal on the long-term effects of operations on the building and its facilities and propose solutions for such anticipated problems. It also prioritized suggestions for changes and improvements to optimize the services the library could offer its patrons. Specific issues and proposed changes and improvements were examined terms of budgetary limitations and investment concerns.

The POE process

A library-user survey was employed to appraise the functioning of the Beitou Branch Library by the general public. The survey was conducted during a two-week period between June 11 and June 24, 2007. Those who participated in the survey were visitors of the library – 13 years old and above. Group visitors, for example, class visitors from elementary schools, Library and Information Science and Architecture Departments of a University, librarians, school teachers and principles, local administrators, volunteers of reading promotion from different areas of Taiwan, etc. were not included in our survey’s patrons. A total of 570 surveys were distributed, and 530 of these were collected. After eliminating 19 invalid returned surveys, 511 valid returned surveys remained. The survey in the form of questionnaires was designed for the specific purposes of collecting the opinions of the library’s users.

The questionnaire for this survey was divided into three parts:

1. **Background information of patrons.** Background information of patrons included the sex, age, educational background, occupation, home address, the travel time from home to the library, and how (the source of information) patrons first knew about the Beitou Branch Library.

2. **Patrons’ use of the Beitou Branch Library.** This part focused on how patrons make use of the facilities of the Beitou Branch Library. Specific questions referred to the time and day of visits, the primary purpose of visits, the most common library activities, frequency of visits, the length of time per visit, specific areas frequented etc.

3. **Patrons’ opinions of the facilities of the Beitou Branch Library.** A total of 104 questions were formulated to determine patrons’ opinions regarding the library and its facilities The five-point Likert-type scale, measuring responses from 5 to 1, was chosen to provide a suitable range for the public to express their opinions.

The returned patron questionnaires were numbered and processed by means of Microsoft Excel statistical analysis. Chi-square testing, ANOVA and Pearson $T$-test were then used to analyze the relevant data and statistics.

Findings of the survey

Beitou Branch Library patron profiles. Of the Beitou Branch’s patrons, 34.3 percent were male, and 65.7 percent were female. The age group of 35-44 years old was the largest (28.6 percent), followed by that of 25-34 years old (19.5 percent), 13-17 years old
Of the Beitou Branch patrons, residents of Beitou District made up 71.9 percent. The length of travel time within 15 minutes comprised 58.7 percent, followed by “31-60 minutes” (24.4 percent). The most common source of learning about the library was from relatives or friends (30.8 percent), followed by the internet (12.6 percent). 146 patrons (32.2 percent) learned about the library from other sources; some knew about the library because they lived nearby or in Beitou District; some because they visited Beitou Park on a regular basis or often took hot spring baths in Beitou. They had been looking forward to the opening of the library since the razing of the old library and the commencement of the new construction project. Some knew about the library because they had walked by it; others because they heard of it while visiting another library, or because they had participated in a company activity that was held in the library.

The patrons’ use of the Beitou Branch Library. A greater number of patrons visit the library in the afternoon (60.4 percent) than in the morning, evening and noon. More people come to the library on Saturday (51.6 percent) than on any other day, followed by Sunday (45.8 percent) and Wednesday (40.0 percent). On the day the survey was taken, the most common purpose for visiting the library was to borrow or return books (56.8 percent), and the next was to read library’s books (49.9 percent), study their own books (28.7 percent), read magazines (20.2 percent) and look for materials (18.4 percent). The most common activities, in order of frequency, were: borrowing or returning books (59.9 percent), reading books (55.2 percent), reading magazines (29.2 percent), studying (29.1 percent), read newspaper (18.8 percent), look for materials (16.9 percent), sit on the balcony and enjoy the view (16.0 percent) and go on the internet (15.9 percent). As for frequency of visits to the library, the most common answer was “two to three times a week” (28.2 percent), followed by “two to times times a month” (21.6 percent) and “once a week” (20.8 percent). As for the length of time spent in the library, the number one response was “one to two hours” (25.2 percent) per visit, followed by “31 to 60 minutes” (24.3 percent), and “two to four hours” (21.1 percent). As for the areas of the library the patrons frequented, the most popular area was the first-floor reading area by the window (19.2 percent), followed by the second-floor reading area by the window (15.2 percent), seats by the shelves on the second floor (13.8 percent), the newspaper area of the first floor (12.2 percent), and the magazine area of the first floor (12.2 percent).

Patrons’ opinions of the library’s facilities. The average numbers (based on the Likert Scale) and distribution of frequency indicate that, other than “Convenient parking” with an average rating of 2.84 and “Number of computers in the computer area” with an average rating of 3.41, patrons were generally satisfied with the library’s facilities, with all other categories receiving an average rating of 3.5 or greater. Among them, the highest average rating was given to “Features of the green building” (4.56), followed by “Architectural image” (4.46), “Public art” (4.18), “Outdoor reading area on the balcony” (4.15), “Others: atmosphere for reading and fresh Air” (4.15), “The flooring” (4.15), “Service desk” (4.10), “Entrance” (4.06), “Furniture” (4.04), “Ease of movement” (4.03), “Signs and directions” (4.01), all with average ratings of more than 4.0. Out of the total of 104 categories, 68 received an average rating of more than 4.0.
The main reason why patrons tend to complain about parking near the library is because there is no library parking lot. Given the special green environment, a parking lot would have a negative impact on the landscape of the park and the traffic safety of the public. Moreover, if the underground level of the library were to be used for parking, the building would require an additional three or four more levels to provide suitable space for book stacks and reading. The Taipei Public Library tried to resolve the problem by having a parking lot built on a nearby plot of public land. The parking lot of the Beitou Branch Library is thus located in the underground parking complex of Park 233 next to the MRT Xin-Beitou Station. But as the parking lot is still under construction and presently unavailable for public use, library patrons find parking around the library a problem (Taipei Public Library, 2007b).

Survey opinions and suggestions for improvements. The analyses of the survey responses and written comments from this post-occupancy study show that the Beitou Branch Library provides a generally functional and very attractive reading environment for patrons. Except for parking and the number of computers, the library patrons are quite satisfied with the library facilities of the Beitou Branch Library. Members of the public think that the building and the furniture are both original, the surroundings are green and serene, and visitors feel refreshed when reading or simply taking a rest in the library’s confines. They approve the efforts made in constructing a green building. However, some worries and concerns remain. They hope certain problems with the library’s facilities can be improved.

The investigators believe that these can be corrected with moderate outlays of time and money in the existing building and avoided completely in the new addition to the building. In light of this study’s findings, the researchers recommend that design studies be initiated to explore the feasibility of achieving the following:

- Urge the Parking Management Office to expedite the construction of the underground parking lot of Park 233.
- Urge the MRT Corporation to improve directional signs at the exit of the Xin-Beitou Station.
- Ask the Parks and Street Lighting Office to make the entrance of the park handicapped accessible.
- Rearrange the circulation to enhance ease of movement without hindrance.
- Adjust the positioning of tables and chairs in the Periodical Area to avoid disturbance by patrons taking the stairs.
- Put soft pads on the feet of chairs to protect the floor and reduce noise.
- Make stepladders available for getting at periodicals on higher shelves.
- Reposition tables and chairs of reading area by the Conference Room on the second floor so that staff members walking in and out do not disturb readers.
- Improve areas with insufficient lighting; reposition light fixtures to improve lighting.
- Adjust the angles of the monitors, increasing the number of cameras, and increasing supervision, to prevent stealing private property of users.
- Adjust shelf size for journals.
- Have the designers examine air circulation in restrooms and propose ways of improvement.
• Change the doors to automatic doors.
• Reexamine the graphics, coloring, and location of signs.
• Examine the safety of outdoor balconies regularly.
• Enhance fire-safety features.
• The steep slope on the roof results in soil being washed away by rain and the problem with the rainwater recycling system on the roof could be rectified by consulting with the architects and reinforce protecting equipment of plants’ area on the roof.
• As for the maintenance of the library building, the exterior walls, French windows, wood floor, and the seam of the balcony’s glass roof should be carried out by professionals.

Conclusion and suggestions
The Beitou Branch Library was conferred the prestigious diamond-class green building award by the Ministry of the Interior, the Taipei City Government Quality Award, Green Building Award, the National Award for Outstanding Construction and Taiwan Architecture Award. Apart from these, the benefits initiated by the library include the following:

*Its innovative design and unique architecture and furniture has created a trend for new design concepts*
*Creating environment-friendly ecological architecture.* The concept of “the green building” has developed over time. It aims at creating architectural space that is friendly to the environment and has minimal negative impact on natural surroundings, so that the earth’s natural environment and the living environment of human beings can sustain each other. The Taipei Public Library not only offers an ideal reading environment to its patrons, but also bears the responsibility of teaching the public. The park has been extended into the library’s interior to create a complete and unique reading environment.

*Developing local features.* Beitou Park, located between Yang-ming Shan National Park and Guan-du Natural Park, is famous for its natural scenery. So, one of the major park activities is sight-seeing. Beitou Branch Library is located within Beitou Water Park, so it is a great place for the public to read and enjoy leisure activities.

*Shaping unique reading environment.* To establish a harmony with the special feature of sulfur in Beitou’s local topography, the library building is primarily a wooden structure. The pillars of the building are covered with planks, and the natural building materials and the wooden structure merge into and replicate the natural environment. Moreover, the wide French windows let in a great amount of natural light, making wise use of this natural resource. When you look out from inside the building, you can see abundant greenery all about. The balcony was smartly designed as an outdoor reading area, so the readers can read while at one with the chirping of birds and the fragrance of flowers.

*Upgrading the quality of reading spaces.* The furniture in the library is all made of wood and specially designed. In the first-floor Book Zone, the bookshelves do not exceed 110 cm in height. This allows patrons to experience the spaciousness and comfort of the library. In the Children’s Room and the Story-telling Area on the underground level, the design is simple and the colors are light. The chairs were
especially made for children. The signs on the bookshelves are marked with punctuation marks so that children can read in a lively and carefree environment.

*It increases the number of library visits*
Judging from statistics on visitors, library users, and book circulation each month, it is clear that a comfortable and well-designed library can attract a great many people to visit and make use of it. Other libraries should take it as an inspiration to improve their interior design and reading environment to increase their population of readers.

*It attracts experts and scholars from all over the world*
Since its opening, the Beitou Branch Library has attracted visitors from countries all over the world, including the US, Canada, Singapore, France, Britain, Norway, China, Japan, Guatemala, Korea, Thailand, Hong Kong, Mongolia etc. Visitors include government officials that plan to construct new buildings, college and university students and faculty members, private companies, library staff members, students of architecture and design and other related departments who come to study the building, library scholars and librarians, grade school and kindergarten pupils on field trips, groups that see it as a cultural landmark and a scenic spot, company representatives, and the general public.

*It increases the visibility of the library and changes the stereotype of the library in the public’s mind*
Numerous reports on the library appearing in newspapers, the electronic media, and magazines have been published. In the promotion of images of Taiwan released by the Press Bureau on August 13, 2007, the Beitou Branch Library is featured among them, reflecting the environmental and ecological efforts of the government, a major achievement of library construction in Taiwan, and an improvement in the quality of life in Taiwanese society (Taipei Public Library, 2007a).

*It embodies the principles of ecological education and has become a multi-faceted learning center*
The Beitou Branch Library is like a book that shows the ecological environment of Beitou District. The building itself emphasizes green qualities of saving energy, recycling water, and generating energy with its solar panels, while its foundation is designed to collect rainwater. All these features make it a choice green center where young and old can learn about the environment in a setting of local history and culture, and a source of information and knowledge.

*It has gained the support of local residents and professional experts*

- **Business contributions for ecology-based educational activities and energy-saving supervision of the Beitou Branch Library.** The Delta Electronics Foundation made a donation to the Beitou Branch Library for the purpose of setting up a solar energy supervisory system to oversee the solar generating system. The company has also provided information related to green buildings and assisted in developing educational training programs on green buildings, beginning in June 2007 (Taipei Public Library, 2007a).

- **It inspires community service among local residents.** Local residents are justifiably proud of the fact that their community is home to such a resourceful, beautiful, and environment-friendly library. With so many visitors making their
way to Beitou on the weekends, they have volunteered to help by sorting library materials, taking groups on tours of the library, and telling stories to children, among others. The library currently benefits from the assistance of 47 volunteer worker (Taipei Public Library, 2007a).

- It has generated corporate sponsorship of green library buildings. After conducting a tour of the Beitou Branch Library, Mr. Cheng, Fu-Tien, chairman of the Board of the Motech Industries, Inc., and Mr. Hung Shih-jin, chairman of the Li Ke-yung Foundation, praised the initiative and the contribution of the Taipei Public Library and each expressed their willingness to sponsor a new library building for the public library. Both library buildings are presently in the planning stage. The library donated by Mr. Cheng Fu-Tien is adopting a full-scale energy-saving design and will bear the name “Solar Library and Energy Conservation Display Hall”. The library donated by Li Ke-yung Foundation will also be a green building and prioritize horticulture (Taipei Public Library, 2007c).

The Taipei Public Library has to propose improvement plans promptly in responding to the suggestions made by the public. Items that are relatively simple to address should be taken care of as soon as possible. Those that require more time and money will be prioritized and a schedule will be worked out to address them.

Apart from giving their opinions on the library’s facilities, the participants in the survey referred to problems with management and collection. Even though these problems lie outside the scope of the survey and thus have not been listed in this study, they deserve the attention of library authorities and should be addressed as a strong indication of the Beitou Branch Library’s commitment to providing outstanding service to the public and meeting all of its expectations.

A comfortable library with beautiful surroundings needs the support and good will of the public to ensure keeping it that way. Since it first opened its doors to the public, the Beitou Branch Library has suffered from many people who have displayed a disturbing lack of respect for public property. The Taipei Public Library should do more to raise the public’s awareness of the need for good manners when visiting the library. Moreover, members of the library staff who work in the green library should be familiar with the concepts of environmental protection and energy conservation in order to be more effective in putting them in practice. Only this can ensure the successful implementation of green building policies so that the purpose of its construction will be realized.

Notes

1. Taiwan Architecture & Building Center. In order to encourage the construction of green buildings that conserve energy and resources and are friendly to the environment, that provide comfortable and healthy surroundings, and to promote the three design concepts of “comfortableness”, “health and natural harmony” and “safeguarding the environment”, the Architecture and Building Institute, Ministry of the Interior commissioned the Taiwan Architecture & Building Center to announce its formal approval of the application for “the Green Building Logo” on September 1, 1999. The logo will be conferred to a green building that meets the seven indices that make up the evaluation system. These include: the greenery; soil water content; daily energy saving; CO₂ emission reduction; waste reduction; water resource; and sewage and garbage improvement. Only with the approval of the Green Building Committee, can a green building receive such a status. However, in the revised version of the Handbook on Interpretation and Evaluation of Green Buildings (Ho, 2003), the
seven indices were increased to nine with two additional indices: biodiversity and indoor environment. Thus the passive definition of a green building, i.e. “a building that is characterized by minimal consumption of the earth’s resources and minimal production of waste,” has been changed to an active definition, namely, “a building that is environmentally friendly, saves energy, eliminates waste, and is health-inducing.” There are two statuses of a green building; one is in the form of a certificate that designates a building as a green building candidate, the other is in the form of a green building license which is given to a building that has met all the conditions of a green building and has been duly appraised. The certificate for a green building candidate is issued to a new building that is under construction and aims to meet all the qualifications of a green building, but has not yet been appraised for a license. Such a building is thereby designated a “green building” and is issued a certificate as a green building candidate. Available online at the Taiwan Architecture & Building Center, Status of the Green Building; www.cabc.org.tw/http://www.cabc.org.tw/project/DocGB/docgb2/index.asp. (accessed July 16, 2007)

2. Taiwan Architecture & Building Center. In the evaluation process in the Handbook on Interpretation and Evaluation of the Green Building, there are five rankings given to green buildings with diamond the highest followed by gold, silver, copper, and qualified. (Note: “Revised Regulations on Appraising Public Buildings as Green Buildings”, Order of the Ministry of the Interior, Taiwan MIA Architecture Research No. 09508501083). According to statistics on green buildings provided by the Taiwan Architecture & Building Center, by June 2007, the number of qualified green buildings in Taiwan was 192. Only one of them had been given the diamond ranking (Beitou Branch Library), four were ranked Gold, two were Silver, and two were Copper. Available online at Taiwan Architecture & Building Center, Green Building Rankings, Public Announcement; www.cabc.org.tw/http://www.cabc.org.tw/project/DocGB/docgb2/index.asp (accessed July 16, 2007)

References


System Administration Department of the Taipei Public Library (2007), “Number of visitors of the Beitou Branch Library and average number of visitors of other branch libraries of the Taipei Public Library”, Systems Administration Department, Taipei Public Library, Taipei, September.


Taipei Public Library (2007c), “Minutes of the meeting on library affairs of the Taipei Public Library, April 26”, Taipei Public Library, Taipei.

Further reading


Helsinki City Planning Department (2000), Vüikki: Ecological Urban Living, City Planning Department, Helsinki.


RPG Partnership (1999), Seattle Public Library – Central Library Facility Program, Vancouver, February.

SERA Architects (2001), Sustainable Planning & Design, SERA Architects, Portland, OR.


About the author

Shu-hsien Tseng is Director of the Taipei Public Library and Associate Professor at the Department of Library and Information Science, Fu-Jen Catholic University, Hsinchuang City, Taiwan. She is also based at the Graduate Institute of Library & Information Studies, National Taiwan Normal University, Taipei. Shu-hsien Tseng can be contacted at: egret@email.tpml.edu.tw

To purchase reprints of this article please e-mail: reprints@emeraldinsight.com
Or visit our web site for further details: www.emeraldinsight.com/reprints