

**Article**

# Effects of Spatial Designs on Young Entrepreneurs and Visitors' Feelings Toward Guangfu New Village, a Cultural and Creative Military Dependents' Village, in Taichung City

**Chia Hui Lin \*, and Yu Hsin Chao**

Department of Interior Design, Asia University, Taichung 41354, Taiwan; zhaoyuxin20010909@gmail.com

\* Correspondence: lin888@asia.edu.tw

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**Abstract:** The Guangfu New Village was the first military dependents' village in Taichung City and has a "cultural landscape." The combination of age-old brick buildings and the rich local cultural history of the village allowed for the transformation of the idle space into a cultural and creative base for young entrepreneurs. However, despite the introduction of the Star Program and government subsidies, the planning is inadequate, causing young entrepreneurs to be confined by the different regulations of the management units in terms of designs and decorations. To solve this major problem, we explored and recorded the "spatial status" of the Guangfu New Village with the concept of a garden city by analyzing the history and architectural features of the village. To develop a military dependents' village with cultural and creative endeavors, we surveyed for this study to identify the advantages and disadvantages of two different village groups. In-depth interviews with young entrepreneurs and local tourists were carried out with a literature review to analyze the development process considering local culture and its results. The needs of different business types and their problems with the management regulations were determined. Based on the results, we suggested designs to transform youth entrepreneurship bases, which serve as references to the Guangfu New Village for investments and planning improvements. The young entrepreneur bases can be a reference for the sustainable transformation model of community spaces. Residents can understand the importance of local culture and identity, which helps young entrepreneurs to solve the obstacles in spatial transformation for SDG 11 (building sustainable cities and communities).

**Keywords:** Guangfu village, Youth entrepreneurship base, Interior space, Design guideline

## 1. Introduction

Given the increasing youth unemployment rate in Taiwan and the persisting problem of the preservation of cultural resources in military dependents' villages, their spatial design must be improved to promote the diverse, localized development of Taiwan's cultural and creative industry. The development encourages young people to return hometowns to work to build up a positive cycle of the spatial transformation of old buildings for the development of the cultural and creative industry in local areas. Through observation and data organization, insights are formed regarding design criteria under relevant regulations and assist young entrepreneurs in reinforcing cultural and economic development. Thus, in the Guangfu New Village, Wufeng District, Taichung, we researched how to establish a set of design criteria for transforming military dependents' villages and generate relevant suggestions through a field survey, an interview, and an analysis.

In this study, The possible needs and directions of interior design criteria were identified from the view of shop owners and tourists on how to reduce subjective misperceptions and false impressions. A set of general design criteria following the regulations was formulated in consideration of the shops in the Guangfu New Village in the future by preserving cultural assets to maximize the benefits of all stakeholders. In an analysis of local history and architecture, cultural heritage preservation stemmed from a river embankment, and green space with local culture was considered to form a diverse base for young entrepreneurs. Details were discussed to improve the tourist experience in the Guangfu New Village.

## 2. Literature Review

Theses, journals, books, and other materials were analyzed to construct principal frameworks: the development of the local culture of the Guangfu New Village and the spatial design of the village.

### 2.1. Cultural Development of the Guangfu New Village

In the mid-1950s, an evacuation plan was implemented to prevent war from destroying government agencies. The Taiwan Provincial Government was moved to central Taiwan. In 1956, the Guangfu New Village was established in Kengkouli, Wufeng Township, Taichung County as the first military dependents' village in Taiwan (Taichung Tourism and Travel Bureau, 2018). With a regional plan identical to that of the garden city Zhongxing New Village, the Guangfu New Village still carries special historical significance as a residential community. Deputy Director Liu Yong-Mao of the Department of Construction, Taiwan Provincial Government, visited the United Kingdom and imported the garden city concept, which was proposed by Ebenezer Howard as comprehensive urban spatial planning from a macro perspective. The purpose of this concept was to solve problems related to urban expansion and sanitation while emphasizing the effective use of agricultural land. After the Jiji Earthquake in 1999, the Earthquake Memorial Museum neighboring the Guangfu New Village was reconstructed by the government to preserve the original site, maintain historical records, and provide live teaching materials to the general public and schools regarding earthquakes (921 Earthquake Museum of Taiwan, 2023). Through the efforts of local nongovernmental organizations, local university professors and students, and cultural and historical workers, the Guangfu New Village was officially registered as a cultural asset on September 18, 2012 (Cultural Heritage Department Of Taichung City, 2020) to be a notable tourist attraction in Wufeng to experience its history by visitors.

### 2.2. Case Study on Spatial Transformation of Military Dependents' Village

Lu and Liu (2020) asserted that idle spaces can be reused for either historical reenactment or cultural innovation. They highlighted that the reuse must align with local sentiments and industrial development. Transforming the idle spaces of military dependents' villages into bases for young entrepreneurs is a global trend for solving space problems and encouraging young people to return hometowns. They can engage in entrepreneurship through which they develop their strengths with government support.

The military dependents' village in Shuejiaoshe was registered as a municipal historic site of Tainan on June 3, 2004. In 2005, all residents were relocated for reconstruction. In 2007, the Armaments Bureau and the 953rd Brigade of the Air Force Defense Artillery began demolishing the village. By 2009, most of the homes were demolished. The remaining undemolished section of the village was subsequently designated as the Shuejiaoshe Cultural Park (Xiao, 2012). Life experiences, historical memories, and the background of the military dependents' village and its community buildings and village plans are the intangible assets of the Shuejiaoshe Cultural Park (Chen, 2016). The feature buildings include seven dormitories and bunkers, black-tile buildings, and dormitories for generals and colonels. Located near the city center, the park is easily accessible. The park's unique history, leisure and cultural characteristics, local specialty cuisine, and cultural assets increase the park's cultural tourism value and contribute to the development of local tourism in Taiwan. The Shuejiaoshe Cultural Park was constructed as a military village when Taiwan was under Japanese rule. It still retains its original state as a military dependents village with unique plants and green installations. The architectural forms and structures of the village suit the local climate. Interior renovations of porches, ceilings, eaves, red-brick ventilation, and user-friendly wheelchair ramps were installed in all the buildings and outdoor trails within the park. The historical sites in the Shuejiaoshe Cultural Park comprise seven themed areas: Main Village Museum, Shuejiaoshe Exhibition Hall, AIR Tainan Hall, and Art Exhibition Hall; the family activity site Aviation Playground, and Chang Village and Noodle Art. The areas are for dining and literature-related activities. The Shuejiaoshe Cultural Park is rich in resources for tourism and recreation to promote and preserve historical and cultural assets. Numerous artworks are displayed in the park to convey historical knowledge to tourists. A uniform restoration method has been applied for a harmonious visual design in the park creating clean, pleasing indoor and outdoor environments. The park also features a comprehensive range of equipment, spaces with diverse themes, and an accessible design. The transformation of the military dependents' village in Shuejiaoshe was accomplished by the construction of the cultural park by a government agency. The model was similar to that applied to the Guangfu New Village. Therefore, the park was compared with the Guangfu New Village to identify its advantages of planning and landscape design for the transformation of the Guangfu New Village.

## 3. Research Method

Data were collected from books, theses, and journals as empirical evidence for the village space analysis of the Guangfu New Village. We visited the Guangfu New Village to investigate the advantages and disadvantages of its local community, architectural spaces, and cultural and historical atmosphere. A questionnaire survey was conducted to examine the perspectives of consumers regarding the spaces within the Guangfu New Village. A structured interview was conducted with the shop owners in the village. The interactions between the shops and consumers were observed to clarify the perspectives of shop owners regarding the aesthetics, atmosphere, functions, and management of village spaces. The interview was transcribed and analyzed to find solutions for specific problems. Disordered language and written materials were organized and summarized based on interrelationships.

### 3.1. Criteria

- (1) **Affective criteria:** The emotional needs of tourists and young entrepreneurs were examined to develop a space design that all people can resonate with. Village spaces must be transformed to enable shop owners to deliver emotional messages to their customers. The nostalgic sentiment associated with the village can be used to create a memorable space that provides a transcendent experience. The Guangfu New Village evokes nostalgia among people across multiple generations, which is closely associated with the local history and culture that developed during its transformation. Given its advantages in historical reenactment and cultural innovation, the village can promote economic benefits and cultural preservation as a base for developing youth entrepreneurship.
- (2) **Aesthetic criteria:** Buildings are considered in the aesthetic design because they are places where humans conduct artistic activities. Indoor spaces must be designed in consideration of the unity and variation between architectural elements (e.g., colors, texture, and rhythms), which play a major role in aesthetics and arts. The Guangfu New Village is known for its red-brick buildings. Without destroying the original façade of the buildings, businesses need to be differentiated and artistically transformed to form a base for diverse local youth entrepreneurship bases.
- (3) **Functional criteria:** Buildings with notable flaws in spatial designs must be renovated to incorporate human-centered designs by increasing lighting and improving air convection to promote the integration of functional elements with aesthetic elements. The garden city concept was applied to the Guangfu New Village to highlight the functional characteristics of the village. The natural and human conditions of the spatial design of the village were analyzed to identify the key factors contributing to its quality and the problems that must be solved by applying criteria.
- (4) **Management criteria:** The effective management and maintenance of the reuse of military dependents' villages play a key role in site planning and renovation. The perspectives of shop owners and tourists regarding village space management indicated that for the artistic renovation of village buildings, urgent and immediately feasible standards had to be developed and regulations must be formulated as a reference for shop owners. Additionally, scientific village planning methods were proposed to improve management standards and economic benefits.

### 3.2. Current Status of Guangfu New Village

Based on the fieldwork and observation results, the current status of the Guangfu New Village was determined.

#### 3.2.1. Affective Advantages

- An art wall exhibits shop characteristics and cultural elements and is decorated using natural plants to convey core values and help customers resonate with culture and nature.
- Most of the shops use wooden furniture and convey the image of a warm village house.
- Satisfactory environmental (old houses and large trees), historical (people and veterans who lived), and affective values (relationships between tourists and shop owners, between shop owners, between shop owners and residents, and between residents and tourists) are promoted.

#### 3.2.2. Affective Disadvantages

- Several shop owners failed to provide clear product descriptions or general cultural knowledge. Their brand marketing was poor, and their emotional connection with the village was lacking.
- Few of the products sold in the village were consistent with the image of the village, leading to poor cultural uniqueness among the shops.
- Narrative or cultural heritage museums were lacking.

#### 3.2.3. Aesthetic Advantages

- The soft furnishings used in the houses of the Llyung Startup Cluster were distinctive.
- The Llyung Startup Cluster featured a harmonious, uniform building façade, and as a base for youth entrepreneurship, it encouraged individuals to beautify spaces according to their individual needs to highlight the differences between brands.

#### 3.2.4. Aesthetic Disadvantages

- Electrical and light cables were exposed.
- Parts of the building façade exhibited peeling and blackening, which were not addressed in time; overgrown weeds formed the cluster vulnerable to mosquito infestation.

### 3.2.5. Management Advantages

- Strong emphasis on building and cultural asset preservation
- The Cultural Affairs Bureau of Taichung City Government solicited Asia University and local nongovernment organizations to promote the development of the Guangfu New Village with abundant job opportunities and resources.

### 3.2.6. Management Disadvantages

- a. No regulations and restrictions were established for the interior and exterior spatial designs of entrepreneurs. Any alterations and additions made to a building must be approved in advance.
- b. Managers, who were elected every 4 years were replaced during their term in office, leading to subjective regulations on space renovation and transformation.
- c. The two existing management units differed substantially in their regulations. One specified that the building façade must be unified, while the other let entrepreneurs decide on the spatial design that they want to apply.
- d. The 4-year contract forced entrepreneurs to leave and lose their regular customers. Without experienced entrepreneurs as role models, young entrepreneurs have limited experience.
- e. The setting of two shops in the same space led to communication problems.
- f. Information on customer flow was not provided in advance during the investment phase. Consequently, businesses were difficult to survive because of the low customer flow on weekdays.
- g. Shop owners lacked training in finance, renovation, and marketing.
- h. Entrepreneurs found it difficult to sustain their businesses because of few customers. Learning to start a business was required so that entrepreneurs could learn how to manage a business.
- i. Because the regulations limited the term of each contract to 4 years, shop owners were unwilling to make major investments in spatial design.

### 3.2.7. Functional Advantages

- Shop owners voluntarily transformed waste materials into usable furniture to create unique and environment-friendly shop environments.
- Purchasing off-the-shelf furniture was a cost-efficient and affordable option for shop owners with limited start-up capital.

### 3.2.8. Functional Disadvantages

- Shop owners selling cultural and creative products had insufficient shelves and exhibition space. Numerous products were piled up disorderly on ready-made platforms, and the resulting visual confusion prevented customers from immediately understanding the characteristics and advantages of displayed products, thereby reducing the competitiveness of the shop owners.
- Indoor spaces were dimly lit and required lighting even during daytime.
- Public restrooms were difficult to find and dirty. Portable toilets were located on the side of the road but harmed environmental aesthetics with an unpleasant odor.
- Restaurants and cafés lacked storage space. A considerable amount of equipment and activity space were required to cook meals. Additionally, because restaurant and café owners lacked knowledge of interior design, numerous usable indoor spaces were neglected.
- Spatial configuration was rarely considered. The existing walls in buildings limited indoor spaces. Consequently, customers were often unclear about where to go during their visits.
- Soundproof was poor, and sound transmitted from the roof.
- Mosquitos flew after 17:00 and drove away numerous customers.
- The location was inconvenient to access, and parking space was limited.
- Customer flow was substantially affected by the weather, particularly during the sweltering summer.

## 4. Interview Analysis

Five shop owners were interviewed including two restaurant and café owners, one plant shop owner, and two cultural and creative gift shop owners, all of whom have different needs for space usage.

#### 4.1. *Affective Criteria*

Several shop owners in the Guangfu New Village lived or studied near the village and started businesses because of their interest in its culture. Some of them indicated that the village was characterized by low entrepreneurial pressure, strong government support, a beautiful environment, and major opportunities for engagement in business management. The shop owners in the village exhibited a partial, incomprehensive understanding of the culture of the village and Wufeng. Thus, additional measures were required to reinforce the shop owners' knowledge of the cultures of Wufeng and Guangfu.

#### 4.2. *Aesthetic Criteria*

Most of the shop owners focused on their storefront appearances and used innovative shop signs to attract customers.

#### 4.3. *Functional Criteria*

The shop owners were unwilling to invest in the renovation because they were only allowed to operate businesses in the village for 6 years. Those who were experienced in design or tooling renovated their shops independently, whereas those with no experience in design or tooling bought ready-made or second-hand furniture even though they were aware of the problems of such furniture. For example, ready-made furniture did not meet product specifications, and the long-term watering of plants dampened and softened wooden floors. Landscape planning had to be implemented to upgrade open spaces and build a leisure garden for tourists to rest and take photos.

#### 4.4. *Management Criteria*

Two shops in the same space led to spatial fragmentation and communication problems. In a narrow space, most tourists were confused, which was a concern for shop owners. They understood the regulations established by academic units to preserve cultural assets but also criticized these inflexible regulations. The shop owners maintained publicity with their skills. Most of the shop owners were willing to continue their lease. In the Guangfu New Village, entrepreneurs experienced low entrepreneurial pressure and received strong government support, being provided with a stable business environment.

### 5. Questionnaire Survey

The purpose of the questionnaire survey was to clarify the opinions of tourists regarding the Guangfu New Village.

102 tourists participated in the survey. 40 were male (39.2%), and 62 were female (60.8%). 62 were aged 20–30 years old (60.8%), and 21 were aged over 50 years (20.6%). 66 learned about Guangfu from their friends and families (64.7%), and 40 learned about the village through the Internet (39.2%). Young entrepreneurship was the most prominent factor in attracting customers in Guangfu, followed by hiking and taking photos. Accordingly, the base for youth entrepreneurship and the unique features of the military dependents' village were the most prominent reasons why tourists visited the village.

### 6. Conclusion and Suggestions

The Guangfu New Village was registered as a cultural heritage through the efforts of the Taichung City Government and organizations. Transforming the village into a base revitalized the cultural and creative industry, and idle spaces were reused. Local cultures and histories must be preserved in multiple formats so that people can experience the living atmosphere of a military dependents village. In the present study, the motivations and background of various studies were explored through fieldwork, a structured interview, and a questionnaire survey. Based on the results, the following conclusions and suggestions were made.

#### 6.1. *Entrepreneurs' Perspective*

The shop owners starting new businesses must focus on functionality and management. Inflexible regulations regarding lease terms and renovations discourage shop owners from investing in shop renovation, resulting in limited shop functionality. For example, the use of display stands that do not meet product specifications prevents shop owners from highlighting the advantages of their products. For shop owners, shop signs are a key aesthetic element, and a unique shop sign is required to attract customer attention. Mosquito infestation and the setting up of two shops in the same space are major concerns for most shop owners. Nevertheless, government support and subsidies have reduced the entrepreneurial risks for young entrepreneurs in the Guangfu New Village, providing them with valuable opportunities to engage in business.

### 6.2. Tourists' Perspectives

The Guangfu New Village has attracted numerous tourists because of its status as a base for cultural and creative industry and its natural beauty. The tourists revealed that they were willing to visit the village if the government and shop owners optimized their site planning and interior space design. The public was concerned about two functionality-related problems: a lack of restrooms in the village and shaded rest areas. Nevertheless, the preservation of the styles and features of the military dependents' village was a competitive advantage as the village's spatial design incorporated its local history and unique shop characteristics.

### 6.3. Affective Criteria

Currently, the settlement plan of the village is focused on organizing indigenous culture exhibitions and providing a base for young entrepreneurs. However, it rarely promoted the cultures of Wufeng and the Guangfu New Village. The valuable culture and history of the village must be emphasized through strategies such as building historical and cultural narrative museums. Technology such as augmented reality can be employed to enhance the reproduction of the original style and atmosphere of the village. Inheritors must continue the story of the village. Cultural asset preservers and residents can be invited to hold narrative-oriented meetings to share about their lives in the village, thereby enabling more people to experience its simple human touch. Most of the shop owners in the village need to focus on marketing their brands but overlook the importance of connecting with the local community. Young entrepreneurs need to be motivated to connect their brands with the local culture to highlight the cultural uniqueness of the village. Only a few billboards were installed in the village. Billboards introducing information on the culture and history of the village need to be presented along the tourist route to enable tourists to learn about the village during their visit. The village can establish a sightseeing route for Wufeng as a tourist attraction to promote as a tourist destination.

### 6.4. Aesthetic Criteria

Currently, only portable restrooms and restrooms within shops in the village are available. Hygiene and cleanliness must be maintained at every corner of each restroom. The space influences a customer's decision to enter a building. Management units must solve the problems related to sun exposure. Shop signs are a key element to highlight individual brand characteristics and competitiveness. Most shop owners design their shop signs as light boxes or standing signs. Templates with various shapes can be used to enhance the aesthetic value of signs. The coordination and application of individual designs need to be determined by the management unit. Design coordination aimed at standardization creates environmental consistency and highlights the architectural characteristics of the military dependents' village. Individual designs accentuate the status of the village as a base for youth entrepreneurship. Shop decorations convey the concepts that shop owners want to convey to their customers. Indoor electrical and light cables were exposed. Management units must install standardized embedded cables to prevent young entrepreneurs from pulling cables which damages the structures of the old buildings in the village.

### 6.5. Functional Criteria

Modular furniture must be provided to meet the needs of the owners of various businesses, particularly restaurants and cafés, plant shops, and cultural and creative gift shops. Restaurants and cafés need to create sufficient workshop spaces for storing equipment and materials for cooking. Plant shops require the areas where plants are placed to receive sunlight. Ladder frames can be used because they prevent the vertical blockage of sunlight. Waterproof materials must be used for floors on which plants are placed. Gift shops must use display stands and storage cabinets that meet product specifications to optimize space usage and accentuate the advantages of their products. Mosquito infestations must be solved with lighting- and environment-based solutions. Low-pressure sodium lamps can be used. Environmental treatment is required by removing water puddles for disinfection of mosquitos. Young entrepreneurs and surveyed tourists indicated that the village lacked shaded resting areas. Seats and viewing platforms must be installed around areas with lush vegetation where tourists can rest and enjoy the natural scenery during summer. The village has numerous indoor partition walls that obscure the locations of specific businesses. Shop owners must install signs that provide clear guiding information and efficiently manage indoor crow flow. Light sources with reasonable color temperature and vivid color rendering must be used in places designed for social interaction, rest, and dining to create a visually and psychologically comfortable environment.

### 6.6. Management Criteria

Management units must be feedbacked by shop owners to improve the entrepreneurial environment and meet the needs of shop owners. Shops of similar businesses must be organized in location to prevent unnecessary competition. Accurate numbers of customers and monthly income information must be provided to young entrepreneurs to help them understand the business

environment of the village. Training in finance, renovation, and marketing is required for them, too. The written regulations are necessary to specify that shop spaces must be restored to their original state at the end of a lease. The resulting disassembly and reassembly of key equipment is resource- and labor-intensive causing damage to old buildings. Incoming and outgoing tenants must communicate effectively regarding the reuse of equipment. Most shop owners complained that setting up two shops in the same space created disadvantages. This resulted in space fragmentation and a severe shortage of space and brand inconsistency, confusing customers to distinguish between products and shops. Because the Guangfu New Village has numerous idle spaces, the scope of restoration must be expanded for a one-shop per-space model. Additional facilities such as feature hostels, open-air movie theaters, and river corridors can be planned to leverage the cultural and environmental advantages of the Guangfu New Village in attracting customers.

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