Micro Architecture in Our Daily Lives

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Micro architecture is made from a range of purposes by necessity. Currently, the surge of small or tiny structures has started to gain popularity among zealous individuals who advocate "living" simply in small shelters. Other compact structures such as site offices, mobile clinics or libraries, wakafs or gazebos, tree houses, food stalls or kiosks, stand-alone public toilets, street furnitures, pavilions, and urban shelters are also recorded in the long list of micro architecture. Tazilan et. al. (2008) refers micro architecture as small or mini buildings that are constructed along public streets and in urban areas such as corner shops, recreational parks, public squares, specific facilities including overhead bridges, car parks, pedestrian walkways. Due to their smallness, they are normally perceived as unimportant in the development of townships and cities, but yet they give richness in the appearance and image of a city. This chapter deliberates on a micro project introduced within an academic facility for a university community. The challenge is to design an annex or an extension to an existing library building for the purpose of reading section that offers more than just a space but also a conducive and interactive learning environment.

Lynch (1960) describes how mental images of these tiny structures could produce a balanced environment for the users. Such setting when introduced in urban areas would assist a person s orientation through legibility and clarity of the paths taken. Simultaneously, these micro structures can be seen as landmarks or nodes that emphasise on physical attraction (Bentley et.al., 1985). These in turn would enhance legibility, visual appropriateness, richness and personalisation. Tazilan et al. (2008) states that our daily lives activities are unconsciously exploiting micro architecture.

The aim of the Reading Corner project was to epitomise the fundamental quality of an interactive academic learning environment in a university campus by extending an annex of an existing library as an introduction to micro architecture for the academic community. The requirements of the Reading Corner project are determined by individual designers according to their conceptual design approach and site synthesis.

The library, which is located at the Faculty of Engineering, Universiti Putra Malaysia (UPM), has the advantage of facing the man-made lake and accessible from the main faculty gateway. This library is shared with the Faculty of Design and Architecture, which is located adjacent to the Faculty of Engineering. Hence, pedestrian circulation is important to be addressed. With a water body as part of the main attraction on site, four different design strategies for a Reading Corner are selected. In general, the Reading Corner functions as a micro architecture that connects public space to be part of the lake. When one builds something in a natural landscape, it is crucial to reflect the consequences of human activities.

Zaim harmonises his design scheme by using land and edge of water to allow for the free circulation of people and natural ventilation through open space planning (Figure 1). Partial of the building is constructed on land and the other part is barely touching the water edge. The soft curve of the outer wall acts as an envelope for privacy (Figure 2 and 3).

Figure 1: Curvilinear planning responding to the lake edge

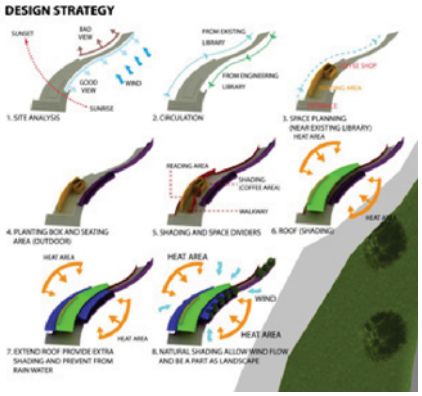

Figure 2: Design strategy for the Zaim s Reading Corner

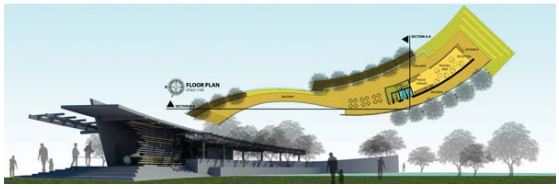

Figure 3: Passive design strategies part of the envelope of the scheme

Using the quality of what water body has to offer, Firdaus and Fadhli designed a structure that goes across the corner of the lake. The structure acts as a bridge that manipulates the Reading Corner as a path that extends the current library building to the covered walkway (Figure 4 and 5). The spatial arrangement in Fadhli's scheme explores curvilinear form with parametric design (Figure 6 and 7) for the structural envelope, giving a snake-like form to indicate richness in the context of micro architecture. However, the drawback of Fadhli's spatial planning is the overlapping of spaces resulting in a clash of activities within the design. Nevertheless, the design can be considered environmental friendly with functional and fully utilised spaces.

Figure 4:The pedestrian bridge across the lake

Figure 5: Planning the Reading Corner as a bridge on the lake

Figure 6: Parametric design as the immediate skin of the bridge

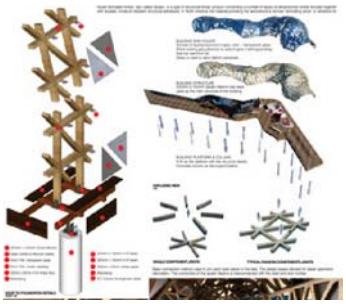

Figure 7: Conceptual diagram of the whole parametric structure

Firdaus emphasises on the flexibility of linear spaces by attaching smaller spaces to the main body to amplify the privacy of the Reading Corner (Figure 8 and 9). Consequently, the public connectivity is segregated. Although the spatial planning may reduce the walking distance from one end to the other, users may end up spending more time in the Reading Corner due to its spatial quality, contextual richness and privacy (Figure 10 and 11).

Figure 8: The connecting pedestrian bridge is only revealed as one passes through the entrance

Figure 9: The open linking bridge is to be used as a through route

Figure 10: Provision of small coffee counter as a strategy to encourage users

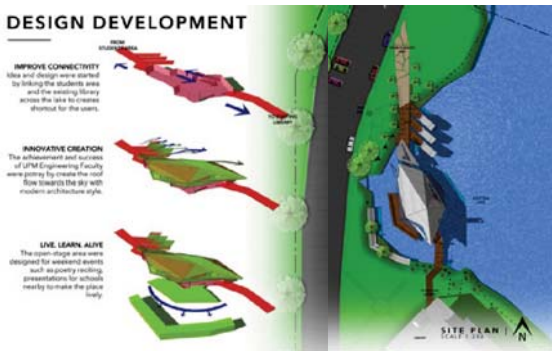

Figure 11: Design development diagram by Firdaus

Another design approach identified in this micro architectural project is the use of water as the destination of the journey to the Reading Corner. Tai Kiat managed to create pod-like structures on the water body giving solitude and isolation to the comfort of users. The view, sun path direction and circulation are three major components that control his design strategies, resulting in an elegant curvilinear plan that helps to ensure space privacy.

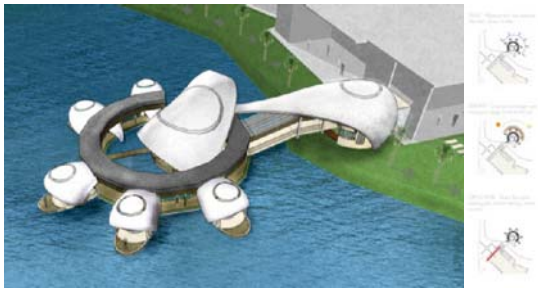

Figure 12: Tai Kiat's pod-like structure seen floating from above

Figure 13: The environment offered in a study pod

The final design strategy established in micro Reading Corner is by spreading across the green open land adjacent to the corner of the library. Yazid confidently used the green grass area to incorporate the micro structure as part of the library (Figure 14).

By doing this, he managed to create a much cosier ambience with trees surrounding the whole structure. The walls of major spaces are installed with motorised louvres that can be adjusted to suit the position of the sun and privacy requirement (Figure 15).

Figure 14: Design development diagram by Yazid

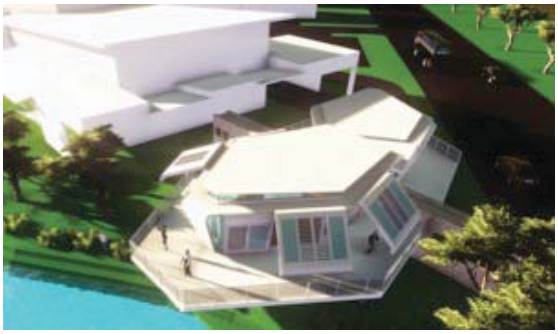

Figure 15: Yazid decided to introduce frolic adjustable walls

Micro architecture has various purposes for different situations with restraint structural solutions and materials. Typically, micro architecture is light-weight, portable, foldable and comes in parts for easy assembly. It has diverse possibilities of practical use and a

function of a building as one unit that has a holistic asset of small sized units. Hence, in the case of "Micro Reading Corner", it has the potential of advocating a new environment that converges many units of micro architecture as an independent building. The Reading Corner project should not merely consider the spatial planning and site context in the case of micro architecture, but to also emphasise on the visual appearance through details in materials, textures and sustainability of local materials, such as what has been described in Richardson (2001). There are four main points to be considered when designing micro architecture, 1. Functional, in which not only in spaces but also components that create those spaces such as the walls, roofs and etc.; 2. Habitable, being small and tiny does not mean it should sacrifice the comfort of the users; 3. Flexible, changes is inevitable, therefore a versatile space should be planned carefully for what lies ahead; 4. No extras, as the area is limited, hence any wastage in circular spaces or services are kept at a minimal.

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