Knowledge Integration between Urban Planning and Landscape Architecture in Contributing to a Better Neighbourhood Open Space

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Supervised by: Assoc. Prof Dr. Ismail Said
• The role of landscape architecture only involve after the layout has been done (Abdullah et. al., 2001)
• Inappropriate zoning and design of open space which caused less social activities
• Open space → Leftover space

Planning Process in Malaysia

PROBLEM STATEMENT
EXAMPLE: TAMAN DESA SKUDAI
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Johor Bahru Tengah Municipal Council

East zone

Ulu Tiram, Masai and Plentong

Lima Kedai

Gelang Patah

Skudai

West zone

Kangkar Pulai

Ulu Choh

Taman Universiti

Taman Tan Sri Yaakob

Taman Skudai Baru

Taman Melawati

Taman Timor

Taman Sri Skudai

Taman Damai Jaya

Taman Jaya Mas

Taman Nesa

Taman Impian Emas

Taman Desa Skudai

Taman Sri Pulai

Taman Sri Pulai Perdana

Taman Sri Putri

Taman Jaya

Taman Seri Orkid

Bandar Selesa Jaya

Taman Skudai

Taman Tun Aminah

Taman Impian Emas

Taman Desa Skudai

Taman Sri Pulai
### EXAMPLE: TAMAN DESA SKUDAI

<table>
<thead>
<tr>
<th>Residential</th>
<th>Playing field</th>
<th>Abandoned areas</th>
<th>Total residential area</th>
</tr>
</thead>
<tbody>
<tr>
<td>Taman Desa Skudai</td>
<td>0.58 ha</td>
<td>3.95 ha</td>
<td>62.98 ha</td>
</tr>
</tbody>
</table>

- Taman Desa Skudai located under the authority of Johor Bahru Tengah Municipal Council
- The statistics for another 4 residential areas that also located under the same authority are shown in order to look into the breakdown of open space and recreational area.

<table>
<thead>
<tr>
<th>Residential</th>
<th>Playing field</th>
<th>Abandoned areas</th>
<th>Total residential area</th>
</tr>
</thead>
<tbody>
<tr>
<td>Taman Sri Pulai</td>
<td>0.68 ha</td>
<td>3.38 ha</td>
<td>77.77 ha</td>
</tr>
<tr>
<td>Taman Sri Pulai Perdana</td>
<td>9.30 ha</td>
<td>1.89 ha</td>
<td>123.51 ha</td>
</tr>
<tr>
<td>Taman Sri Putri</td>
<td>0.5 ha</td>
<td>0.54 ha</td>
<td>50.38 ha</td>
</tr>
<tr>
<td>TOTAL</td>
<td></td>
<td>5.83 ha</td>
<td></td>
</tr>
</tbody>
</table>
RESEARCH GAP

OPEN SPACE

- Human ecology
- Urban forestry
- Environmental modelling
- Geography
- Urban planning
- Landscape architecture

Research

Importance of natural environment for the citizens
 Residents’ preferences of open space
 Human behavioural pattern towards open space
 Zoning ordinance of open space and requirements

Knowledge integration and how they view open space is still inadequate

Gap

Based on the fact that urban planners and landscape architects have different definitions in theory and concept for open space (Lau, 2013)
AIM:

To contribute towards better neighbourhood open space by using knowledge integration between urban planning and landscape architecture
AIM & OBJECTIVES

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OBJECTIVE 1:
To explore the criteria that urban planner and landscape architect consider in planning for the development of open space in neighbourhood area
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OBJECTIVE 1:
To explore the criteria that urban planner and landscape architect consider in planning for the development of open space in neighbourhood area

OBJECTIVE 2:
To examine the knowledge integration between urban planner and landscape architect in planning for the development of open space
Good landscape planning:
• Both planner and landscape architect consider the area being planned as a system.
• Area design as a system; considering the connectedness and interrelatedness of the area.

Young (1974)
Knowledge Integration of Urban Planning and Landscape Architecture in contributing to a better Neighbourhood Open Space

METHODOLOGY

Variables

- Urban planning: Function, Structure, Landuse
- Landscape architecture: Function, Structure

Designing questionnaire

- Sample size 1: Urban planner, n=30
- Sample size 2: Landscape architect, n=30

Data analysis

- Pearson Chi-Square Test

Result

Obj 1

Findings and Discussion

Obj 2

Conclusion
<table>
<thead>
<tr>
<th>Author</th>
<th>Theory</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lyle (1985)</td>
<td>For landscaping, emphasize that location is an important component and the design must be like a system.</td>
</tr>
<tr>
<td>Hall (1990)</td>
<td><strong>Functionalism</strong> of landscape is an important motivating idea for landscape planning. Functionalism of landscape is how the components fit together in part-whole relationships.</td>
</tr>
<tr>
<td>Hobbs (1997)</td>
<td>Explain the component of <strong>structure</strong>, <strong>function</strong> and <strong>change</strong> in details.</td>
</tr>
</tbody>
</table>
**FUNCTION**
How to create a functional open space?

**STRUCTURE**
How to arrange the overall landuses?

**LANDUSE**
- How to locate the open space?
- Appropriate zoning of open space

- Size of open space
- Distance
- Attractiveness

- Connecting elements

- Zoning
- Distance

- Population
- Aesthetic
- Well-equip
- Well-maintain

- Pedestrian path
- Green linkages
- Residential and surrounding landuses
- Distance

**Variables & Items: Urban Planning**
FUNCTION

How to create a functional open space?

STRUCTURE

• How the open space could be connected to the neighbourhood area?
• How the element of open space itself can connect to each other?

Variables & Items: Landscape Architecture

Active open space
Passive open space
Division
Parking area
Trees

Connecting elements
Pedestrian path
Green linkages

Landscape characteristics preferences

Items
### FINDINGS & DISCUSSION

<table>
<thead>
<tr>
<th>Urban Planner</th>
<th>Landscape Architect</th>
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<tbody>
<tr>
<td>✔️ Extension of knowledge of LA practices</td>
<td>✔️ Landuse</td>
</tr>
<tr>
<td>❌ Ecological needs</td>
<td>✗ Sustainability</td>
</tr>
<tr>
<td>✔️ Public welfare</td>
<td>✗ Long term issues</td>
</tr>
<tr>
<td>✔️ Comfort and pleasure</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>❌ Exposure of LA/UP knowledge by UP/LA during bachelor education</td>
<td>✔️</td>
</tr>
<tr>
<td>✔️ Consultation between UP/LA and LA/UP during work in general</td>
<td>✔️</td>
</tr>
<tr>
<td>✔️ “LA/UP should aware with UP/LA preferences”</td>
<td>✔️</td>
</tr>
<tr>
<td>✔️ LA should involve from the early stage of planning</td>
<td>✔️</td>
</tr>
<tr>
<td>✔️ “Today’s open space in neighbourhoods did not meet the requirements..”</td>
<td>✔️</td>
</tr>
</tbody>
</table>

- Aesthetic
- Extension of knowledge of UP practices
- Landuse
- Sustainability
- Long term issues
- Public welfare
- Comfort and pleasure
- Landuse
- Sustainability
- Long term issues
- Aesthetic
- Extension of knowledge of UP practices
### Findings & Discussion

#### Criteria for Urban Landscape

<table>
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- Contact with nature
- Aesthetic preferences
- Recreation and play
- Social interaction
- Well maintain and secure

#### Criteria to Ensure the Open Space Connected to the Neighbourhood

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- Appropriate distance
- Pedestrian path
- Appropriate size with population
Summary of overall findings

- Planning Guidelines for Open Space and Recreational Area (2013)
Knowledge Integration

1. Development planning process can be amended by allowing landscape architects to be involved since the beginning of the process.

2. Urban planners and landscape architects should be familiar with each other’s roles (educate both professions).
1. Knowledge Integration Between Landscape and Planning In Contributing to a Better Neighborhood Open Space: A Review
   • The 8th SEATUC Symposium
     Universiti Teknologi Malaysia, Johor Bahru, Malaysia, 3rd – 5th March 2014

2. Knowledge Integration Between Planning And Landscape Architecture in Contributing to a Better Open Space
   • Asian Conference on Environment-Behaviour Studies
     Chung-Ang University, Seoul, S. Korea, 25-27 August 2014

   • International Alliance for Sustainable Urbanization and Regeneration (IASUR),
     University of Tokyo, 24-27 October 2014