BEHAVIORAL IMPACTS OF UNIVERSITY COMMON PLACE

Facility management research on campus planning and design

University campuses provide both formal and informal learning opportunities to students. Dining facilities from the view point of common place are considered to be one of the places where most informal interactions would occur in a campus. The previous role highly depends on the place making qualities of the dining facility including the physical and social components. This study focuses on studying the actual patterns of use giving meaning to common place within the dining facilities. Data from five dining facilities of three universities campuses was collected and analyzed to understand the needs of users and the patterns of behaviors in relation to the physical features of the setting in general. The study concludes with providing recommendations to the planning and design of successful dining facilities as common place.

Keywords: common place, dining facilities, anchored tables, small group ecology, campus, place making

1. INTRODUCTION

Facility Management goal in university campuses is to make use of the available assets and facilities aiming to increase the effectiveness of the total educational process while reducing the costs. University campuses should strive to cater for the needs of its users whether formal or informal. Universities are starting to realize that creating a better campus environment parallel to academic excellence would pave the way for bypassing peer universities. Based on the concept of place making in campus planning and design introduced by Dober (2003) the physical and social components of campus common place are marked to create livable and memorable places.

The dining facilities of a campus work as a magnet attracting students and other campus users at scheduled break hours between lectures, it might seem that eating is the main purpose, but taking a closer look at the users in a dining hall would show that eating is a byproduct of other activities and interactions. Dober (1996) elaborates that the changes in the type and appearance of food services is one of the most significant changes taking place in campus centers these days. The importance of the design of any dining facility was pointed out by many researchers; Kimes & Robson (2004) suggest that generally users prefer anchored tables in dining facilities more than unanchored ones. They claim that where students position themselves in a restaurant relative to other users and relative to prominent architectural features affects their desire to stay, interact with others and their emotional comfort expressed in their behaviors. In this regard anchored tables are those that are found near a permanent architectural feature such as a window, wall, partition, or column that provides more privacy and helps to establish and maintain personal territory providing for both more comfort and more opportunities for interaction and elongated stay times. Unanchored or free tables are those free standing tables that provide less territorial control and then less privacy leading to somewhat a feeling of discomfort, making this setting less effective in terms of providing a wide potential behavioral pattern for its users. In addition to that they assume that the table configurations whether side by side or diagonal also affect the pattern of use and frequency of interaction Klassen, Trybus & Kumar (2005) explain the importance of planning food services in campus as it
affects the quality of life in campus.

2. RESEARCH OBJECTIVES AND METHODOLOGY

The main objective of this study is two folds; first it aims at studying the place making qualities both physical and social that encourage the campus users to use the campus common place especially within the dining facilities systematically in a manner that promotes informal interaction. Second to gain better understanding of the actual behaviors and patterns of use of dining facilities from the view point of common place. The layout and the environment of the dining facility, the location of meal block time in relation to the university break hours, the system of administration and service way and location of dining facility within campus, all those factors and many others would contribute to the success of such facilities as a common place - a place where students practice a wide range of activities and share knowledge.

The research findings in campus common place can impact campus planning, design and management by providing solid recommendations as guidelines to be used in future university campuses focusing more on place making qualities of common place and particularly within dining facilities.

As a methodology the research was more qualitative in nature focusing on making use of the techniques of visual documentation, observation, behavioral mapping and video recording. Studying the physical features of dining facilities common place required the use of casual observation surveys extensively and visiting many universities. In these surveys the physical features of relevant common place was explored and documented by photography in addition to the actual patterns of use, later this data was combined as recommended by Sommer & Sommer (2002) with the vivid first visit personal feelings and impressions. On the other hand the study of actual behaviors in dining facilities common place made use of observation sessions conducted by video recording supported by behavioral mapping of selected dining tables. The focus to be on studying these dining facilities and their layouts from the view point of common place; that is observing the actual patterns of use and the range of activities taking place in the dining facilities besides the main activity which is eating. The video recording was used to record users’ activities in the surveyed dining hall and the number of users at both the entrance and exit. Those recordings were used to plot place centered maps based on Sommer & Sommer (2002), these maps allowed for showing where students mostly sat and the patterns of seat choice. Collier & Collier (1988) favored using video recording in observation sessions that involved crowded settings as the case in the dining facilities; it enables tracking activities more precisely within time, this would extend the understanding of the setting to include not only what activities may take part, when and where but also how such behaviors happen giving a more complete image.

3. CASE STUDIES

Based on primary observation, five dining facilities were chosen for the study. The video recording sessions were conducted for two hours during the lunch time. The case studies included first Toyohashi University of Technology (TUT) restaurant (two consecutive surveys were held on 26th and 27th of April 2007). Second in Nagoya University Higashiyama campus, the study considered two dining facilities which are the north-coop restaurant (two surveys held on 10th and 11th of May 2007) and the Forest restaurant (two surveys held on 17th and 18th of May 2007). Finally another two facilities were studied in Mie University including Cafeteria 1 (one survey held on the 25th of October 2007) and Cafeteria 2 (one survey held on the 26th of October 2007). More information about the selected case studies is shown in the table below (Table 1), studying the table shows that the average rate of seat

<table>
<thead>
<tr>
<th>Table 1</th>
<th>Basic Information of the Selected Dining Facilities Case Studies</th>
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<tbody>
<tr>
<td><strong>Area (m²)</strong></td>
<td><strong>Seat No.</strong></td>
</tr>
<tr>
<td>TUT</td>
<td>600.16</td>
</tr>
<tr>
<td>North-coop</td>
<td>536.14</td>
</tr>
<tr>
<td>Forest</td>
<td>416.42</td>
</tr>
<tr>
<td>Cafeteria 1</td>
<td>536.14</td>
</tr>
<tr>
<td>Cafeteria 2</td>
<td>416.42</td>
</tr>
<tr>
<td>Average</td>
<td>501.06</td>
</tr>
</tbody>
</table>
occupancy was highest (51.7%) in Forest restaurant compared to other case studies which indicates the success of its layout to allow more users to dine although it focuses less on providing shared tables, also this facility served more than four times as its total capacity within the two hours survey. The Forest restaurant which is the newest dining facility in Nagoya University was seen to be unique (Fig 1): more care is put on the design elements including the variety of table layouts, multiplicity of configurations, location of tables in respect to other elements, colors and décor elements and lighting scheme. In addition the data gathered there was more complete and that is why the results of Forest restaurant will be used to demonstrate the following general findings.

4. GENERAL PATTERNS OF USE

The video recordings were analyzed. The users of dining halls were plotted every five minutes to create behavioral maps; the aim was to understand the general patterns of use and how the different tables were occupied by users within time.

Studying the resulting plotted data of the five dining facilities case studies, it was clear that the use of the dining halls could be understood by dividing the patterns of use into three phases in relation to time and the congestion seen in the hall, those phases include the pre-peak, peak and post-peak periods. Each phase exhibited certain common aspects of use, this included the preference of certain seat locations within the dining hall, the table choice mode, the number of users in general and the number of users sharing tables as well as differences in procedures to attain privacy and preserve own personal space.

In the pre-peak phase the use of the dining hall in general was stress free, there were more empty tables than the number of users entering into the facility, the choice of table was based on own personal preferences, it was seen that in the early stage users would prefer to sit in the accessible parts of the dining hall mostly found closer to the cashiers. Priority was given for sitting at anchored tables: the high value tables found near the window were occupied first then came the wall and partition anchored tables. As the time passes more tend to sit in the other parts and at shared tables. As for the table choice mode, users at this phase whether individuals or in groups would try to place themselves at different tables trying to avoid sharing tables with others and picking the edges of tables mostly. Single tables are preferred by small groups and single users prefer to sit on the bar like sittings if available especially those found near the windows.

In the peak period the number of users in the dining hall in general increased, the users spread on almost all tables found in the hall, the table preference and table mode choice were more stress influenced, seek and hunt strategies were used and given priority over own preferences. Seek and hunt means looking for empty seats then moving to occupy them. Sharing was noticed even on small size tables. Proximity to others was tolerated especially on large shared tables and the bar like sittings. Some large sized groups were seen to sit in the middle of table to keep potential users away, its worth to mention here that even in the most crowded situations the shared tables were only fully occupied in several cases. It was noticed that many groups respected the borders of small tables used to form the shared tables as being territorial markers that guarantee the integrity of their personal zones: users who sat adjacent to each others yet on different tables expressed more comfort.

In the post-peak phase, there were fewer students than the peak phase but generally more than the case of the pre-peak phase. More users were sitting on anchored tables, and students were still spreading on a large portion of the dining hall tables. As for table choice mode, there was a return to the stress free table choice mode, tables were selected according to own preferences and to the perceived value of tables favoring anchored tables near windows. Groups of users were selecting different tables occupying either edge of table first. Users were seen to avoid sharing tables with others when possible: if such sharing happens then the different groups would place themselves on either edge of table.
5. FOREST RESTAURANT CASE STUDY

Forest restaurant survey held on the 18th of May 2007 was chosen for further analysis because it was conducted in a more rigorous manner and that the frequent users behaved more naturally being accustomed to the presence of cameras and observers since it was the second day survey.

5.1 Behavioral Maps

The behavioral maps listed below demonstrate the patterns of use described earlier within the context of this particular case: for instance it was noticed that during the early pre-peak phase users would prefer to sit in the east south edge of dining hall due to ease of access (Fig 2). Also in the peak phase sharing was noticed even on small tables especially at 6-seat tables which were frequently shared by two groups simultaneously (Fig 3). Sharing tables with others was avoided in the post-peak phase, yet when sharing happened groups placed themselves on either edge of table (Fig 4).

5.2 Structured Analysis

A table by table analysis was conducted focusing on:

i. The group formation of users: this focused on group members’ numbers, gender and the total number of users in general.

ii. Table profile: focusing on the concept of anchored and free tables, each table was given a code to ease analysis (Fig 5).

iii. Activities: focusing on the total stay time: a distinction was made between the meal duration as being the time of food eating and interaction duration as being the sustained interaction (more than two minutes) between members of a group after finishing meal.

iv. Patterns of users: in terms of belonging to eat and go or eat and stay patterns. The users who stayed after finishing eating were considered to belong to the eat and stay patterns while those who left directly were considered to belong to eat and go pattern.

More groups ranging in size from single users to five-user groups preferred to sit on anchored tables, this was mostly apparent for single user groups and two-user groups, the first groups mostly sat on bar like sittings ate quickly and left giving space to more single users to select such a type of tables, while for the latter many two-user groups sat on 4-seat and 6-seat anchored tables denying other larger groups especially those of four-user and six-user groups to make use of such tables as intended. The previous point can be supported by the fact that the differences in group-numbers selecting anchored or free tables decreased as the group size increased, in fact more six-user groups selected free tables although many six seat anchored tables were made especially to accommodate such groups, also for large sized groups more users chose free tables which corresponds to the size of tables (Fig 6).

Generally all users groups regardless of gender combinations preferred to sit on anchored tables, this may be related to the high value of such tables and the comfort it provides its users. Yet gender effect was somewhat clear especially for female groups: female groups chose anchored tables twice as much as choosing free tables, its worth to mention here that the ratio of female users to male users was (1:4). Also the difference of table type selection was noticed to be less apparent for mixed groups (Fig 7).

5.3 Small Group Ecology

This analysis uses knowledge based on small group ecology according to Sommer (1969) to analyze the behaviors of groups of users observed within the dining hall. The aim is to understand the mechanisms and dynamics of users behaviors while selecting seats and interacting with the physical and social qualities and other users. The study divided the groups of users into: single users, two-user, three-user, four-user, five-user and more than five-user groups as a means to ease the task of analysis, each group of users was tracked and studied in relation to the available table layout. Three examples will be discussed in the following paragraph.

Single users avoided sitting directly across other single users, while proximity to the side was accepted in crowded conditions. In one case a single user had no choice but to sit across other users as the other side was fully occupied, he chose a seat in front of a two-user group avoiding sitting across other single users (Fig 8).

Users would try to keep their personal zone intact and react to any invasion. A single user was sitting on a 4-seat table, his position on an
external seat conveyed his desire to control table and keep intruders away. Due to crowded conditions, a two user group decided to share table with him. A female user sat on the seat beside the single user and moved her seat towards him, she seemed as if she was trying to force him to leave table. The single user's posture and gesture and moving his seat to the edge of table showed his annoyance and discomfort: he finished quickly and left (Fig 9).

Competing for empty tables was noticed, though it was not an aggressive competition. Two female students were standing at peak time waiting for a table to be empty; they seemed to be waiting for a specific table near the window to be vacant, but as they saw a table becoming vacant at the other side near the internal wall, they rushed quickly towards the table, one female led the way followed by her colleague. Another male student spotted the same table and rushed to it from the other side but he turned away laughing as he was beaten by the other female group who reached table and quickly sat on internal seats putting their bags on empty external seats to drive other potential users away (Fig 10).

Swanquist (1999) 10 argues that campus dining facilities should be flexible and multifunctional: it should be hybrid food service places that are comfortable and lively places to hang out with friends. According to Deasy & Lasswell (1990) 11 the users of dining facilities fall among two groups, first those who like to eat alone and quickly, second those who want to eat in groups considering dining to be a social event, the successful dining facility should provide for such alternatives. Common place according to Komatsu & Kato (1994) 12 includes all non specialized space that is connecting to and adjacent to specialized spaces which are designed to fulfill the formal purpose of any facility. Strange & Banning (2001) 13 stresses that educational environments need to possess certain elements to succeed: a feeling of security and belonging, mechanisms to induce students to engage in campus life and a sense of community. Scott-Webber (2004) 14 elaborates that certain behaviors of the potential campus users is induced and affected by the university's physical features and institutional nature.

6. DISCUSSION IN LIGHT OF PREVIOUS RESEARCH

In reference to dining facilities common place, Whyte (2001) 15 explained that food is one of the major attractions in public places. Milstein (1999) 16 stresses the importance of providing more seating alternatives and food serving methods to create successful places.

6.1 Features of Prominent Place Making Elements

The findings of the research agree with many of the previously stated points of view, the study of the several case studies showed that the prominent place making elements may include:

i. **Clear and strong definition of the dining process**: this can be done by providing dining facilities that follow a clear service process reflected by its internal planning and design: Movement and service spines would be wide enough to serve the potential users even in extreme crowded conditions.

ii. **Multiplicity of seats and tables configurations and layouts**: this element is one of the most important, as users come to the dining facilities in different groups formations and with multiple attitudes towards the dining process, tables layouts should try to cater for the different potential users providing places for those who intend to eat and go or for those who intend to eat and then stay for interactions. The dining facilities should try to provide the highest number of anchored tables, as seen through the various surveys most users would prefer such tables also it would be wise to limit the use of shared table as such tables are never fully occupied which contradicts with the main aim of such tables.

iii. **Providing proper lighting and color schemes and other complimentary elements that provide the users with a feeling of comfort and relaxation**.

6.2 Frequent Activities Pertaining to Common Place

The activities pertaining to common place were more prominent in the relaxed and stress free periods in the dining facilities. Generally some activities were noticed more frequently including:

i. **Multiplicity of Activities**: the user would consider the dining facility to be a comfortable place to practice a wide range of activities besides eating; this may mean that the user would be engaged in a sequence of various activities in a planned manner.
ii. Meeting Others: The dining facility would be used as a meeting place such meetings might be arranged in a deliberate way to be more like a lunch meeting. The other form includes making use of the available tables and seats to hold a discussion as the main activity: here food and beverage are not consumed.

iii. Spontaneous Meeting: The users would be coming separately having mind getting a pleasant meal, yet due to the gathering nature of the dining facility they end up meeting friends.

iv. Following Daily Habits and Rituels: Dining becomes part of the daily system or schedule of campus life. Users in campus develop affiliation to certain groups and even develop attachment to certain seats or tables. This is reflected in many habitual rituals to make the dining event more relaxing and enjoyable.

v. Hanging Out: The dining place is seen more like a lounge or a place to hang out and pass time. Users keep the table for a long time: their activities include a wider range of purposeless activities.

7. CONCLUSION

The creation of effective dining facilities as common place should be the primary goal in campus planning, design and management. The concept of place making is essential to create livable common place, the focus to be on both the physical and social components. One of the most important place making elements within this context is providing more anchored tables as the base of table layouts in the dining facility. Institutional dining facilities are mostly crowded especially at lunch hours, which leads to reduced control over territory by reducing comfortable table choice possibilities. Users would seek anchored tables that provide more control: making it easier to defend territory and personal space. This helps to provide a comfortable environment amid crowdedness. Having more control in an environment provides more freedom and comfort to act.

Providing anchored tables is an essential response to the needs of social interaction and secure territory among dining facility users. In addition multiplicity of choice should be incorporated in the planning and design of dining facilities. Table configurations should take into account the profile of groups served, the actual patterns of use and behavioral needs of its frequent users: shared tables proved to be unsuccessful and unpopular, on the other hand bar like sittings were popular especially among single

users. Also 2-seat tables were seen to be necessary in the dining hall as two-user groups formed a reasonable portion of users' groups. The Facility Manager in a campus should take actual uses and behaviors of its frequent users into consideration to create effective dining facilities: the priority is providing more control and/or interventions in the environment which leads to successful common place.

BIBLIOGRAPHY