

**FACILITY MANAGEMENT RESEARCH ON CAMPUS OUTDOOR PLACES AND DINING FACILITIES**  
**Adaptation of Learning Commons Concept to Promote Motivated Learning Behaviors**

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■ **ABSTRACT:**

Place making contributes in creating the overall image of campus, furthermore it is considered to be essential to design successful and pleasurable outdoor common areas and dining facilities. The diversity in common place environment should be sought by facility managers and designers. Such facilities must provide its users with a technologically enriched environment and spaces that encourage collaborative work and socializing which promotes knowledge sharing as well as research in a relaxed stress free environment, unlike the available formal environments found in laboratories and classrooms. Recently the learning commons is emerging as a new trend in university library design, the essence of learning commons concept may be applied to other campus facilities including the outdoor places and dining facilities.

■ **INTRODUCTION:**

These days higher education is facing new challenges. Universities have developed to be composed of a complex of landscapes and buildings; according to Dober (2003) this complex supports the educational and recreational life of its diverse users as well as taking part in developing the surrounding community. Place making is an essential first step in creating rational and pleasurable campus designs especially outdoor common areas and dining facilities that are heavily used by the campus community, place making aims at producing the larger picture of the campus.

Mostly when mentioning university campuses, the image of curricular activities pumps into mind; lecture halls, laboratories, exams and other forms of formal learning, yet it's the informal learning induced by interaction among the campus community that enriches the whole higher education process. Strange & Banning (2001) recommend Educational environments to provide three elements to succeed: a feeling of security and belonging, mechanisms to induce students to participate in activities and campus life and a sense of community, such elements assure the excellence of the educational process including its formal and informal parts. A sense of community is essential for the campus users to engage in fruitful interactions.

Campus Common place is where most informal learning occurs.

Many studies focused on learning environments such as schools, colleges and universities, but most of them as Deasy & Lasswell (1990) point out, considered learning as a process in terms of teacher and students in classroom discarding the fact that learning activities take place whenever individuals respond knowingly to a stimulus. They also ascertain that learning involves acquiring new knowledge, skills, experience and wisdom; as such this may occur anywhere in a school room or a corridor and in this case even in a campus common place.

Kennedy (2001) recommends that this necessitates the campus environment to be designed to be more livable; this means giving students more than classrooms and formal learning, it means providing them a comfortable place with many choices to perform a wide range of activities such as shopping, listening to music, eating, meeting or just to hang out and relax. Hood (1993) relates comfort to physical and psychological elements, and with creating opportunities for users to interact with others users they care about or share a certain experience with.

The essence of the concept of learning commons can be applied to unconventional facilities in campus, here the dining facilities and outdoor place in campus are considered to be the favored candidates for such pioneer trend. As mentioned before such places already serve as hubs of interaction among the wide spectrum of the campus users, this relative advantage can be further enhanced if the actual needs and the prevalent patterns of users are acknowledged and taken into account to create an enhanced learning environment that is flexible, multitasked and technologically enriched.

■ **RESEARCH PURPOSE AND METHODOLOGY:**

This paper aims to provide a behavioral analysis of campus common places in light of the emerging learning commons concept, trying to give fresh perspectives that encourage the strife to create a diversity of common place environments, as well as providing feedback to design motivated learning commons around campus.

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The camps outdoor place and dining facilities are to be studied in terms of their place making qualities (physical attributes) as well as their social environment yet more focus would be put on the analysis of the patterns of use at the selected places in relation to informal interactions and motivated learning possibilities, aiming to enhance the outdoor space and dining facilities overall design and environment.

As a methodology the study starts with a literature review in reference to informal interaction importance to learning, as well as related issues including place making qualities of such places weather outdoors or within dining facilities. In outdoor studies structured observation was followed as a method based on time-lapse photography, while the study of dining facilities made use of observation sessions conducted by video recording supported by behavioral mapping of selected dining tables being uncovered by footage.

The case studies selected included Toyohashi University of technology campus outdoor mall focusing on A-Hall outdoor place (Block A) and particularly discussing the cases of informal interaction while Forest Restaurant in Nagoya University Higashiyama campus was chosen for the study of dining facilities. The following table (Table.1) shows some facts about the chosen universities.

Criteria	University		
	Toyohashi	Nagoya	
Land Area (Hectare)	35.56	322.206	
Built Area (sq. meter)	104851	671345	
Students No.	1848	16118	
Faculty No.	211	1806	
Staff	156	1483	
Total Population	2215	19407	
Departments	Undergraduates	9	9
	Graduates	9	13
	Research Centers	13	14

Table.1.Selected Universities Facts

■ OUTDOOR PLACE IN TUT:

Toyohashi university outdoor common place is unique; it's the essence of campus design, where the central pedestrian mall forms the core of campus life and a rich place full of place making elements that are worth studying. A structured observation survey was done on the 24th of April 2006; the central pedestrian mall in Toyohashi University was observed focusing on grasping the users' behaviors and actions as well as their movement within this space.

Due to its centrality this space is frequently used by students all around the clock, yet for this survey the time between 11:30am and 1:30pm was chosen; this time is related to the university lunch hour, so more students as well as staff and faculty would have their break hour and meals around this period. Primary observation indicated that this period would be the most congested in relation to outdoor common place use making it the most appropriate for this study.

Block A is the most important, due to its location near the main lecture hall complex (the main gathering Place of students),

the place making elements include the strong definition of space by the surrounding buildings, its location, clear circulation systems through and around the space and the different sitting zones available, while place marking elements include the use of white color for external surfaces of the buildings and landscape elements, transparent glass to guarantee visual continuity between internal and external common space and the nearby fountain as a distinguished land mark (Fig. 1).

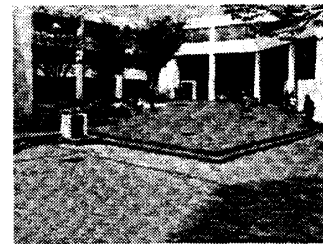


Fig.1.A-Hall Outdoor Place in Toyohashi University

Behavioral maps were created by interpreting the collection of observation photos, a photo by photo study was conducted, all users locations, activities and manners of activities were plotted on the outdoor common place plan making use of a special legend that includes symbols to express the different observed activities and the manner in which a certain activity was carried out whether sitting or standing and so on (Fig.2).

This process included a deep analysis of users' behaviors trying to read the photos as accurate as possible in terms of location, activity and groups of users who seemed to be together, taking into account reviewing several consecutive photos in relation to the groups or individuals under consideration (Fig.3).

Stretching	Laying	In Between	(Ground) Sitting	Standing	Sitting	Manner	Activity
☉	☉	☉	☉	☉	☉	☉	smoking
☉	☉	☉	☉	☉	☉	☉	talking
☉	☉	☉	☉	☉	☉	☉	phone
☉	☉	☉	☉	☉	☉	☉	reading
☉	☉	☉	☉	☉	☉	☉	noting
☉	☉	☉	☉	☉	☉	☉	nothing
☉	☉	☉	☉	☉	☉	☉	passing
☉	☉	☉	☉	☉	☉	☉	Sleeping

Fig.2. Activity Legend



Fig.3. Interpretation of Students' Activities Using The Special Legend

Many activities take place within the outdoor common area in a campus; such activities are dependent of many factors including: the appropriateness of the climate, the nature of campus landscape and overall pattern of design as well as factors related to the students themselves in terms of their preferences, autonomy and needs. The parts of outdoor common

place which witnessed the heaviest concentration of users engaged in activities were considered to be activity spots.

A block was seen to have more dense activity spots; mainly because it's related to more extensive use by students around the clock who are found near the main lecture hall complex, as well as the fact that students consider this block to be theirs which gives them more freedom to perform a wide pattern of activities, many activity spots were found around sitting fixtures where many students would group to engage in many activities (Fig.5).

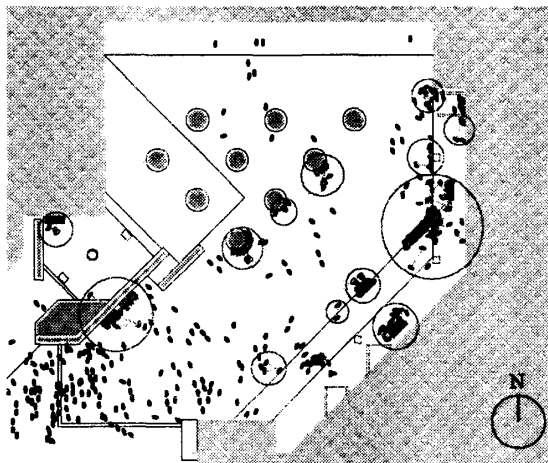


Fig.5. Activity spots in A block

The major pattern of activity observed in Tut outdoor common place related to the informal and motivated learning was the Knowledge Sharing Activity; such an activity takes place in a formal or informal way, many students take part in a discussion about a certain topic with some of them possibly writing or reading a book while talking to each others. It is a purposeful activity aiming to share knowledge gained by one or more of the students to others which is one of the main aims of universities, this activity is considered to be complementary to the formal process of learning. Mostly it involves one or more students reading a book or a newspaper while others seem to be lessoning, as noticed the users are sitting almost on the ground yet arranging themselves in a somewhat circular organization to ease interaction, the campus designer could have encouraged this trend by just adding some flexible tables and seats (Fig.6).

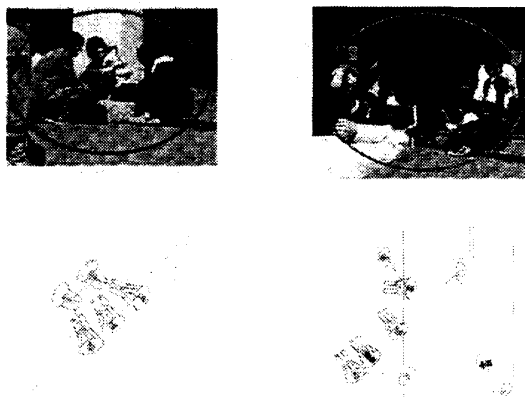


Fig.6. Knowledge Sharing Activities.

#### ■ FOREST RESTURANT IN NAGOYA UNIVERSITY:

The Forest restaurant is the newest dining facility in Nagoya University at Higashiyama campus, any person visiting this facility would feel that it looks different from its counterpart facilities within campus; the environment here is unique, more care is put in the different 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. Any dining facility within campus is considered to be the place where most informal interactions usually happen, it's a hub of activity and a pleasant place to be in not only during the meal hours. In this regard the Forest restaurant seems to have all the previously listed qualities, its distinguished features are clearly expressed in the patterns of use and activities taking place within the dining hall. This place is considered to be a special case that is why it was chosen to conduct more in depth analysis of the data collected during the observation sessions.

This survey aims to understand the actual behaviors and needs of the campus users observed in the dining facility, such understanding would pave the way for creating a better environment that promotes for the optimum use of such facilities in terms of quantity and quality. An observation study was conducted by holding two video recording sessions at the dining facility, the sessions were held on two consecutive days in the May of 2007, the first took place on the 17th and the second on the 18th. Although the dining facility serves three meals per day, the lunch meal was chosen for the survey since this time is considered to be the most congested, the survey took place for two hours at each observation sessions between 11:30am-1:30pm.

The video recording was analyzed using unstructured viewing of the footage as the first stage, the whole survey recording was viewed, impressions or other significant happenings observed during the survey session were recorded on a special log prepared for this purpose. The survey of 18th of May was chosen for further analysis, the selection was based on that the second survey was conducted in a more professional manner making use of the lessons and mistakes of the first survey and that the frequent users would behave more naturally being accustomed to the presence of cameras and observers. The users of dining hall within the second survey were plotted every five minutes; the video recording was stopped every five minutes, then each user appearing to be sitting on a designated table was plotted on the plan of the dining facility. The aim was to understand the patterns of use and how the different tables were occupied by users within time.

Studying the resulting plotted data, it was clear as mentioned earlier that the use of the dining hall 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 includes: the pre-peak, peak and post-peak periods (Fig.7). Each phase would show certain common aspects of use, this includes 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.

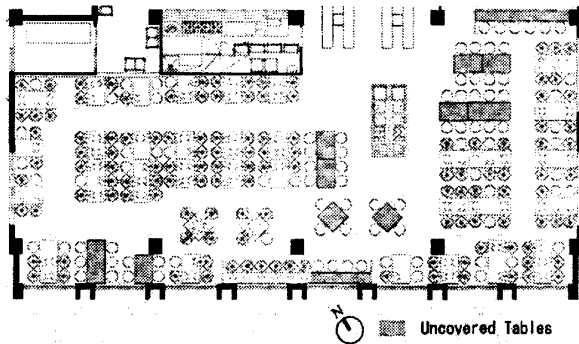


Fig.7. The peak Phase as Seen in The Dining Hall at 12:35pm, Forest Restaurant

The Forest restaurant witnessed various patterns of use and activities besides eating, such activities supports the notion of common place in the dining facilities; such facilities should be designed to support the actual observed behaviors and activities besides eating. Many activities as such were observed by analyzing the video recordings of the dining facility survey (Fig.8 & Fig.9). Eating and lunch hour within the context of campus is thought of as being spontaneous meetings generation event. The university system is organized to provide break hours between the consecutive lectures and other formal learning procedures, users of the campus within time program their food breaks according to the pre-set academic schedules. The majority of users at lunch hour would be heading for the restaurant of their choice to have their meals, mostly they would be moving in groups with friends but sometimes due to schedule differences they go separately, without planning they pump into friends and take advantage of the occasion to engage in interactions.



Fig.8. Fruitful Meetings and Discussions in The Dining Hall



Fig.9. Hanging Out in The Dining Hall After Meal

#### ■ DISCUSSION OF CAMPUS COMMONS NOTION:

Bailey (2005) associates the term learning commons to the physical, technological and social places that provide for collaborative work and support creating and sharing knowledge yet such places are mostly related to university libraries. While Schmidt & Kaufman (2007) refer to two models of commons;

the first is consultive focusing on problem solving and somewhat reactive while the second is educational focusing on the advancement of students making it more proactive, the dining facilities and outdoor place can be considered from the point view of the second trend. Within this paper the aim was to broaden the scope of the learning commons concept to include any facility or space that provides for informal and motivated learning opportunities. The multiplicity of activities observed in the study especially those pertaining to informal interactions among campus users points out to the importance of these spaces, furthermore these places should be highly considered to serve as hybrid places; that is providing multiple functions and chances to engage in a wide spectrum of informal activities in support of other formal learning carried out in campus. Usually such places are scattered all around the campus, if their environments and designs are to be enhanced to cope with the notion of learning commons, it would make them serve as supportive incubations of knowledge sharing, paving the way to extend the benefits of informal and motivated learning and broadening the commons concept application to include the whole campus.

#### ■ CONCLUSION:

- Place making in campus helps to create livable spaces that induce users to engage in informal interactions, yet designers need to cater for the users actual patterns of use.
- The dining facilities and outdoor places can make use of the concept of the learning commons; there should be more focus to provide diverse environments.
- The design of emerging commons in campus especially in dining facilities and outdoor place should build on the trends followed to create successful learning commons, such designs should be: Open, Free, Comfortable, Inspiring and Practical, aiming to create hybrid places.

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