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Procedia - Social and Behavioral Sciences 85 (2013) 308 – 317

Procedia
Social and Behavioral Sciences

AcE-Bs 2013 Hanoi

ASEAN Conference on Environment-Behaviour Studies

Hanoi Architectural University, Hanoi, Vietnam, 19-22 March 2013

"Cultural Sustainability in the Built and Natural Environment"

Open Space as Meaningful Place for Students in ITB Campus

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Abstract

This paper analyzes the usage of various open spaces in ITB campus, and identifies essential features that constitute the space as meaningful to students. The result indicates open spaces that are located along the main axis of ITB campus have distinctive meanings to students, and who mostly occupied them are the first-common-year students. Spatial configuration to the axis creates distinctiveness and sense of place to students. Greenery and courtyards around classrooms play also significant role in stimulating outdoor activities and informal social gathering between classes. Meaningful open spaces vary from courtyards, well-defined pedestrian ways, building corridor and veranda.

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Selection and peer-review under responsibility of Centre for Environment-Behaviour Studies (cE-Bs), Faculty of Architecture, Planning & Surveying, Universiti Teknologi MARA, Malaysia

Keywords: Campus; open space; meaningful place; ITB

1. Introduction

Campus physical environment is an essential feature that influence students attraction to a higher institution. Some campuses organize the design based on a big idea of higher education environment, and some others focus on the campus landscape or architecture of the buildings. Anyhow, most campus in Indonesia has been designed on the western model with little understanding that its success is largely based on the physical surrounding and local setting that offer many possibilities for student's responses and behaviour. The campus, as a behaviour setting, composed of human or social aspect of the setting and the nonhuman component or physical aspect. Students interact each other within a physical environment such as pedestrian ways, parking lots, indoor and outdoor activities areas, and buildings that vary in size,

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color and arrangement. Many campus designs are defined to express the architecture of the buildings rather than human comfort needs. Campus makes little effort to provide outdoor areas for student activities although that will enliven the campus life. The importance of outdoor environments on campus is far greater than simply their aesthetic appeal. To spend time in outdoor places is a necessary element of a healthy campus life.

Campus life is active and well in open spaces, and functioning open spaces have become as appealing as classrooms to students. Many students do not have the opportunity to go to open spaces for social events. They are fully occupied to study in the privacy of their territorial where formal activities take place. Many students desire for social activities whether perhaps only during a brief lunch hour. When students are going out the classrooms, they get to see and observe firsthand other students as they are different ages, races, and relationships. The encounters can help to build a sense of community and tolerance that in turn provides the support for a flourishing campus life in an increasingly multicultural world.

Everyday memories, as well as, memorable experiences of students are often tied to meaningful open spaces and symbolic buildings that make the campus unique. Typically students like and remember the open spaces of the campus more vividly than the buildings. Campus design expresses institutional identity differently than the students perceive their campus life. Campus design must identify meaningful places to students and pursue to care for them. Unique lively spaces on campus are critical to institutional identity. For most campus users, the campus landscape is critical in providing an image of the institute.

Just as most learning activities of students to occur indoor has been moved to open spaces nowadays, public and semi public spaces in campus have now become the unique territories of students. The public life of campus is now richer and more diverse than in the previous time. The precedents of campus design cannot provide models to emulate this contemporary life in campus. The needs of the users and the everyday use of space between classrooms should be critical to deciding how the spaces are designed. This paper would like to address the variety of outdoor spaces that are being used by students to walk, to study, relax and to interact. Reviewing the existing uses of outdoor space will illustrate the needs of open spaces in campus for learning environment and reflect places that are meaningful for students. The study screens an existing campus to identify the presence of outdoor activities and uses. The result will inform types of open space that may provide pleasing, comfortable, accessible, supportive, and meaningful place for supporting formal learning activities.

2. Literature review

This study is stimulated by the literature and researches on human dimension in public space, which is supplemented by case studies of campus design in United States. As the study began, it was set off by the various social research that had been done on public space, but how little of it was applied on campus public spaces. Having through much literature and existing campus spaces, it came to the conclusion that public space in campus has critical values to serve for a better learning environments (Strange, 2001, Chapman, 2006, Kenney, Daniel R, 2005). The study is intended to provide inspiration on campus design to all those concerned with the strengthening of learning and community life. The identification and evaluation of student's need in campus spaces is by then explored for enabling the campus spaces to become meaningful places to students. The approach assumes that a good analysis of public space must be initiated by spending time over there, watching how the place is being used, and documenting how it feels.

Open spaces on campus have similarities with urban setting in which they are composed of buildings, open spaces and pedestrian ways. Open spaces are the place for sports, recreation, play, contemplation, meeting and social activities. The physical environment in terms of open and structured spaces may be

defined as the environment's utility for individual and social uses. The quality of outdoor spaces supports the relationship between people and increase the quality of urban or university life. People's places should be designed and managed to serve the needs of their users, accessible to all groups and providing freedom of action. Public space design as well as campus design has the responsibility to understand and serve the user needs, which is only partly a matter of good visual design. The success of public open space is in its use, and the use and popularity of a space depend greatly on the location and the details of its design (Marcus and Francis, 1998). Studies on urban spaces (Ujang, 2010, Carr, 1992) suggest that systematic attempt to compile of what seems to have worked and not worked, what appears to be appreciated and not appreciated by the users of existing spaces are essential for the design of new open spaces. Designers are frequently hampered by not having the time to search out appropriate people-based needs and performance related solution.

In devising solutions it is important to consider that campus has many buildings with different characteristic of open spaces. The entire academic community shares the same spatial structure, yet the outdoor space design must encompass public and private areas. The analysis of outdoor spaces at American campuses leads to design issues of large common areas and specific places of courtyards and space between buildings which occurring in more than one place (American Council on Education, 2006). The quality of spatial experience must response to user needs and support functional, convenient, safe, nice, exhilarating experiences of campus users. Fluency between indoor and outdoor spaces, suitability for the realization of student's activities, variety in use and convenience for every user are the principles of spatial quality on campus design (Marcus and Francis, 1998, Dober, 2000).

The primary motives for making a public space in campus is often cited as for visual enhancement, environmental enhancement and image enhancement for the institution. From the users perspective, the public space may create a different set of benefits, which may not have been intended (Aziz, Azhan Abdulah, et.al., 2012). The physical design of campus is supposed to express the vision and mission of the institution and transmit it to students, faculty, staff and visitors. Nevertheless, it may create unintentionally to the opposite effect. The students may not care and feel the image of the campus when they do not have everyday experiences in their campus life. Institutions of higher education care about the quality of student's experience of being on campus and the strengthening of learning on campus. For the students, the quality they cared about is bound to places where they live, study, play and move around from one activity to another.

A basic premise for the design of public space in campus is to provide a meaningful place for basic student needs such as comfort, relaxation and social encounter. The public space for students is the place where they may act more freely than under constraints of the study place. In public space students can learn to live together because the space can be changed by public action and owned by all. It introduces a sense of power and control limited only by rights of others. A meaningful space offers people to make connections between the place, their personal lives and the larger world (Carr, et al. 1992:20). A meaningful space is relating the physical setting to the social context. Personal memories and shared experience to a place make the place becomes meaningful to the student. Spaces that satisfy student needs and offer meaning will be attractive and likely well utilized. Therefore, the assertion of the study is that values of public space must be comprehended out of an understanding of why students go to and use spaces, and what space means to the users over time.

After reviewing all the studies on public space users, a set of criteria for successful public space is formulated as follows:

- Be located where it is easily accessible to and can be seen by potential users
- Clearly convey the message that the place is available for use and is meant to be used
- Be beautiful and engaging on both the outside and the inside
- Be furnished to support the most likely and desirable activities

- Provide a feeling of security and safety to would be users
- Encourage use by different subgroups of the likely user population, without any one group's activities disrupting the other's enjoyment
- Offer an environment that is psychologically comfortable at peak use times, in regard to sun and shade, windiness and the like
- Allow users the option, either as individuals or as members of group, by using it for special events, or by temporarily claiming personal spaces within the setting
- Be designed with equal attention paid to place as an expression of visual art and place as social setting.

3. Methodology

This research is undertaken to encourage preferences of users as criteria for campus design. There is a lack of study on open spaces in campus in that campus design in Indonesia is referred to as a new, unusual, surprising and imaginative process of creation. In reality, users tend to be relatively conservative and pragmatic in their preference to space uses. Hence, it is necessary to gain understanding what has worked well in local setting and make incremental improvement out of it instead of reinventing model from other cultural setting. The research is based on literature review, site observation and questionnaires to 230 students of ITB. 60 respondents are students who are having activities at courtyard around their departmental buildings, 108 students who are hanging around at the veranda of strategic buildings, and 52 students who are sitting around in major common area. The questionnaire is filled up in March 2012 while the observation is regularly undertaken from March to October 2012. The respondents are randomly selected from 9 clusters of buildings in the west and east part of the main axis, who gather in open spaces and departmental buildings, and have individual or social activities.

Campus open spaces provide information on the image and setting of a higher education environment. Open space becomes the better place to attract and retain students to gather and meet each other. The study will describe the ways students utilize outdoor spaces for their needs of social interaction, and the ways students organize informal activities during their study time. The first step is mapping out student activities in outdoor area throughout campus site, which subsequently enlighten places selected by students for their regular activities. The following step is to classify outdoor areas in relation to its meaning to students, and associate them to the geometrical layout of the campus. Student's outdoor activities are observed and analyzed for:

1. The type of social activities
2. Its spatial attributes
3. The concept of territoriality

The questionnaire is managed to organize student's opinion in selecting spaces for informal activities and their preferences in using open spaces. The analysis from the observation and questionnaire cover:

1. The climatic aspect of shade as a determinant factor for thermal comfort
2. The spatial layout and configuration to accommodate individual and group activities
3. The materials construction for space utility

Data analysis discusses the identification of open spaces in relation to its flexibility of uses and the outcome of visual attraction in supporting preferences in open spaces.

The observation is conducted only in the afternoon where most students are doing outdoor activities, since in the morning they are mostly in class and having formal indoor activities. Field survey has taken two weeks during the weekdays, and observation is documented by series of pictures. Student's behavioral setting is concluded in photographs, in order that it conveys the visual and psychological factors of meaningful places in campus.

4. Result and discussion



Fig. 1. ITB Campus map: meaningful places for students
Source: ITB map (2007)

The ITB campus is marked with geometric ordering of spaces in the provision of regularity and order of formal arrangement. The main axis functions as a common area between the main north and south

gateway, and comprises of tree-lined long straight rectangular street and pedestrian ways bounded by historical buildings. It connects the historic public park of Taman Ganesha at the south with the sport venue Sabuga at the north. Approximately one third along its length, a major east-west axis crosses the pedestrian ways, and at the crossing point stands up a symmetrical multistorey modern building creating a contrast to the surrounding local-style buildings. The white light-expression buildings become the centre of public space in campus, and many students use its veranda for social gathering and casual study. The veranda in this situation acts as a living room and provides a viewing gallery for people moving around on pedestrian ways and streets. The open space around this building becomes the social focus of the campus.



Fig. 2. Main axis area (a) To the north gate; (b) Between buildings; (c) Green open space; (d) To the south gate

Most of the respondents have outdoor activities on campus for 1-3 hours (60.5%), while 37.2% spend 3-6 hours in outdoor areas, and only 2.3% spend more than 6 hours. 57% of the respondents undertake outdoor activities in group of 1-5 people, 39% of 6-10 people and 5% in larger group of more than 10 people. The non-formal activities undertaken by students mostly are in the evening (57%), in the afternoon comprise to 37% and in the morning are limited to 6%. Students (70%) enjoy having a discussion or chatting in open spaces, and 51% of them see open spaces as the best waiting place for the next lecture. There are significant numbers of students (46-49%) who use open spaces for their study and lunch break, while for leisure come to the figure of 31%. The features of open spaces that students attracted to are shaded area (81.30%), easy access (75.22%), uncontrolled atmosphere (72.61%), proximity (67.39%), sitting facilities (62.17%), power supply (50.87%), spaciousness (50%) and view to passer-by (38.70%). Relating the student's preferences for outdoor areas to the geometrical layout of ITB campus, the meaningful place on ITB campus may be identified as three different spaces, namely the common space, the veranda and the courtyard.

4.1. Common space

Common areas in campus landscape are streets and open spaces that are not territory of departmental buildings. Their existence reinforces the spatial structure of the public area and supports the meaningfulness of meeting and gathering space. Majority of students on foot enter the campus from the formal north and south main entry, and the open spaces in between provide spaces for waiting, casual studying, people watching, relaxation, display, bands play and sport activities. All spaces in the main axis of the campus generate a high degree of use throughout the day and into the evening. Along the common areas are buildings of student centre, student union, library, bookstore and stationary, banks, general lecture halls, research centres and amphitheater. All students are familiar with these facilities, and the parade of passerby make the areas have plenty to observe. The main axis area becomes the important social and perceptual orienting reference. The amphitheater functions as a stage for music performance, volleyball and basket ball venue, and temporary exhibition. The linear design creates a promenade for thousands of students who enter each day from the south and north gate. This axial route with trees lining

the pedestrian enhances the sense of boulevard and place to watch the passing crowd. It generates student's informal activities and becomes a strategic place for social events.

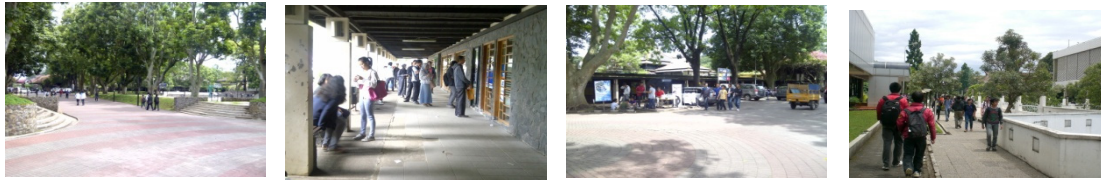


Fig. 3. Common space (a) Amphitheater; (b) Bookstore and ATM booth; (c) Promotion corner; (d) Library

4.2. Building's veranda

Each student has a home base around which his or her daily campus activities circulate. To find out whether or not students have a home base, the questionnaires indicate on a campus map which building or outdoor space they would consider as home building or home base. The home base is usually the student's major department, where they take most of their classes, meet their adviser, and attend departmental events. Since undergraduate and postgraduate students have a home base, they feel attached to their department buildings. The first-common-year students do not identify any place as a home base because they do not yet belong to a certain department. They choose strategic located buildings in campus and spaces around their classrooms as the home base. The central route patterns and circulation paths along the main axis direct options to the new students to establish uses of space. Most students enter campus from the main gateway and open spaces nearby are then established for waiting, meeting, casual conversation, studying, relaxation and other informal activities.



Fig. 4. Veranda of (a) Campus Center; (b) Labtek VI; (c) Labtek VII; (d) Labtek VIII

Apparently the need to feel that one belongs to one place is strongly compelling. Students, although they have no formal activities in the building, still appropriated a place to which they returned daily. The buildings are look upon as houses, and analogically some elements of front and back yard are needed to identify its position. The front veranda of a house is the physical and psychological transition from the public to private life of a family. The front veranda of a campus building similarly offer this transition, from the campus as a whole to a department, and it become the significant social and meeting place for students. The adjacent spaces of the entry to a building have the greatest concentration of outdoor uses. The need to study and meet other people casually can only take place outside the class and formal program. Therefore, places that have some form of seating or steps to accommodate casual waiting and meeting are especially popular and heavily used as well, even though they have no provision for sitting and studying.



Fig. 5. Veranda of (a) Casual study; (b) Relaxation; (c) Group discussion; (d) Resting and passing through space

Clearly the orientation to pedestrian ways of a campus has a lot to do with meaningful places. Where most campus users walk between buildings, and where building corridor or veranda is spacious, the pedestrian area evolves into a sense of place. Students become attached to the place because they use the space as a resting place as well as a passing-through space. Orientation to pedestrian ways make the students familiar with the sights, sounds, sensations and visual images while sitting, relaxing, eating or conversing.

Students have a need for outdoor spaces where they feel at home and can easily return each day to meet friends or just to relax. The veranda of buildings located in central area of the campus is the most favored place for casual outdoor study, where students sitting on the floor in a group formation. Students feel comfortable sitting on the edge of a space with something at their back. Free standing columns, walls, trees, provide anchor spots for sitting and group gathering. What is common to meaningful places is natural elements (trees, shrubs, grass) form the boundaries, blocking out the presence of nearby buildings, and provides shade for thermal comfort.

4.3. Courtyard

In contrary to veranda, an open space enclosed by buildings forms the backyard of the building and normally is used for private relaxation and utilitarian functions. Enclosed spaces between buildings in campus make the students feel a greater sense of territory. Most organizational activities of student union usually take place in these areas. The courtyard is supportive for the creation of sense of community because it is away from major pedestrian flows and yet easily accessible from the buildings nearby. Its presence is obvious to the building's occupant but less significant to passerby.

While the front veranda is hard surfaced, the courtyard usually provides a soft green transition or buffer between building and traffic flow. ITB campus have many courtyards – significant green spaces where building residents can relax differently than on the front veranda. At these places students can have a talk with friends in private, eating, and studying close to their home base. A change of environment between classes is vital to student's mental health. The experiential contrast between classroom and greenery brings a calming antidote to the stress of the study. First-common-year students, who are moving between numbers of buildings on campus for classes, tend to indicate the main axis area of campus as the most meaningful place. Older students are more likely to indicate immediate surroundings of their home base as a meaningful place. The concept of courtyard is most significant for graduate students who spend most of their time in campus within and around a single building.



Fig. 6. Courtyard of (a) Classrooms; (b) Student union; (c) Administration offices; (d) Department buildings

Campus life occurs between scheduled program and departmental buildings. The impression of a building from a distance is significant, but the eye-level, day-to-day experience of passing through building and using the space between buildings are more valuable for campus life. In between spaces related to a home base are meaningful places for students as it provides privacy and shelter from visual interruption. Courtyards and visual sequences introduce colours and textures of the wall framing the space in that campus reveals itself gradually as a progression of changing outlooks. Variety of courtyards may inflect and inform the purpose and physical forms of a unique learning environment. A campus that establish many smaller places-some formal some open-will generate a mosaic of visually different spaces

5. Conclusion

Gateways provide access, but they can also physically form common areas and view corridors into and out of departmental buildings, and therefore, they serve social purposes. The visual progression from the formal entry to a pleasant walk and nearing prominent buildings in the distance become an experiential spatial sequence. The immediate view of surrounds, the glimpses of views and vistas along the way, the appreciation of spatial sequence in moving from one place to another will affect the student's sense of being in a vivid learning environment. Form and texture of varying plants, and trees lining and embracing the walks - with their shades and tints of green - raise the campus landscape along the pedestrian routes to a meaningful place. By manipulating the hierarchy of paths, the space will regulate the direction of student's movement. The long walk along the main axis where social activities are interconnected with physical space is imbued with symbolism and rich with memories of a meaningful place. The main axis exemplifies the dominant spine – a long, landscaped promenade limited to traffic access, which functions as a visible orientation to any students.

The building's verandas accommodate a sense of transition place in that users feel apart from pedestrian traffic. For climatic reason, overhangs, planting and natural breezeways should be coordinated to create a cool and shaded place. Comfortable seating should be provided on the veranda, in particular to the side of main pedestrian flow entering building. Seating arrangements should permit students to meet and talk as a group. It is surprising that outdoor tables are rarely provided on campus and not considered as useful furniture for study use. Visual connection to the outside and a wide overview to the greenery seem to be extremely attractive for students. To stare out to the open space may intersperse the study with short rests.

Learning is a social activity occurring as much outside the classroom as within it. The outdoor environment that maximizes collegial encounters and exchange of ideas will also maximizes formal indoor learning process. Different departmental classrooms and variety of open spaces in proximity improves the chances that a student will cross paths with other students. This condition will increase the likelihood to collegiality and to interdisciplinary communication. The active and visually attractive outdoor environment can significantly affect the blooming of sense of community.

The result of this study can probably be applied to campus planning and design to help in the overall arrangement of buildings, the encouragement of memorable places, the location of entrances and open

spaces, and the detailing of building entries and outdoor study spaces. Outdoor space as form-giving elements are so far arranged through historic symbolism and aesthetic qualities, and with no reference to how these spaces might be perceived, valued and used by students. Campus design has a unique opportunity to layout circulation, service and open space systems that support student learning process. Landscape and environment-behavioral studies need to be involved from the start of campus design to provide transition space, common open space, specific place, and placement of site furniture, that support full use of outdoor space for studying, relaxation, contemplation, socializing and entertainment of students.

Acknowledgements

This study is supported by the Innovation and KK Research Grant Scheme from ITB, 2012 (SPPP No. 113/11.C10/PL/2012). The author would like to thank Ms. Senimiawaty and Cindy Rachmi, postgraduate students of Urban Design ITB, for the assistance during the field study. A high appreciation is also dedicated to Undergraduate student of Architecture ITB: Desiana Pratiwi, Auliani Senni and Gita Nofieka for the field work and data collection.

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