STUDENT CENTER
KASEM BUNDIT UNIVERSITY, ROMKLAO CAMPUS

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FULFILLMENT OF THE REQUIREMENTS
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A Thesis Submitted in Partial
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2004
Recreation based on working is one important thing for students to find something valuable during studying in the university. Learning in globalization, Students have to be in learning society to access knowledge and many people in society. Therefore, society of learning is another way to support learning in the university. Human relation, Leadership, personal, problem-solving skills are in objective that student can learn to be the skills for there own from being in Student Community Center. Therefore, new educational environment is the direction of design that can be the one part of learning process along with communication in society to support them in globalization.

Thesis Approved:

Date Pisit Viriyavadhana, DEAN

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Chapter 1 Introduction

1.1 Project Background

1.1.1 Inspiration for thesis

Recreation is depending on what the people want to select by themselves in their mind and then they get happiness directly. Therefore, recreation actually more concern human interaction than tools to bring recreation.

Human recreations have many unlimited needs but sometimes it can be resisted with learning. In the other hand, some people might thing that learning is their recreation.

Value of recreation depends on human interaction among recreational object. The result during recreation is creativity, friendship and respectability each other. Moreover, sense of service is important in human community. Member in community normally arrange group to participate friendship. Therefore, achievement of group will be successful depend on how to arrange group to joy and share what they interest. Interaction in community can create spaces where respond what they want to achieve because this interaction might be found in community. Sometimes, they want something true and suitable for them.

Team building skills can be found in community where human power is important for working. Therefore, human recreation is the one way to archive team building skills. In addition, Sense of Service for helping can be found in there. Normally the person helping is depending on obligation, moral standard and force of interaction. All of them are naturally recreation as well as recreation for their own.

Finally, learning among recreation can be one part of recreation. In additional, communication during learning in the community is also the recreation that is the strategies to design educational environment.

1.1.2 The object of thesis

The objective of this thesis is to treat educational environment that students can learn about value of recreation among learning. Therefore, students will have good experience and good mind for being the one part of knowledge. Students will have 4 elements in their life:

1. Strong body
2. Good mind
3. Creativity
4. Sense of service
1.2 Thesis Statement

1.2.2 Reason for Selecting Project

1. The 2nd building has just finished only the exterior work but the interior work has not finished completely (4 floors finished). Therefore, the exterior work should be design based on new educational environment.

2. The building is for all students. Therefore, student community center is suitable to support them in terms of community and learning service.

3. To create satisfaction and fulfillment in educational environment among students equally.

4. To design educational environment which is suitable for develop skills as follow.
   - Human relation skills
   - Leadership skills
   - Personal skills
   - Problem-solving skills

5. To develop a global perspective among students for being the one part of knowledge.

6. To be the one part of learning process that can provide graduate with sufficient knowledge to respond in the public and private sectors.

1.2.3 The objective of Study

1. To design an educational environment that students are able to change student’s attitude to be positive for studying in the university.

2. To have educational environment that is easy to communicate between students and faculty.

3. Students are able to access minority student performance positively.

4. Students can be ready for learning and solving by themselves under the time of facing competitive job market.

5. To achieve design to access the source of knowledge with potential ability of student as follows
   - Work effectively with others
   - Motivating / Influencing others
   - Team-building skill / ability to work as self – manager teams
   - Communication skills

1.3 Scope of Research

1. Facilities and service planned in student community center such as organization, student lounge, food & cafeteria, library etc.

2. Student affairs programs in terms of service learning and student activities.

3. Method of design for communication of students who have different background in public.

4. Contribute visual interest such as lighting and colors to change student’s attitude for fascinating university.

5. Technology for service learning.
6. Smart furniture following the factors in the university.
7. Number of student and student background such as religion, belief, society.
8. The direction of new educational environment.
10. Site analysis based on beliefs, facilities and environment control.

1.4 Scope of Project

Student Community Center in the building 2
- Reception and information area
- The student recreation
- Learning resource center
- Student affair

1.5 Definition of Terms

- Smart Furniture: The technologies envisioned and serviced for the university such as huge media walls, watch-sized computer etc. they are the part of learning service to inspire students in educational environment.

- Flexible Facilities: The demand of new technology and flexibility. Interior design will design facilities to support coming technology as well as variety of user requirements.

- Contribute Visual Interest: Contextual sensitivity become a major consideration for education. In additional, there is a renewed interest in planning the space. Rapid technological changes within society are actually reinforcing the importance of designing venues dedicated to human interaction.

- Stimulating Space: The space that make student fell physically active and interested. It becomes point of design in new educational environment to support learning.

- Minority Students: A small number of students that are in the part of a larger group but they are different in some way from most of the community.
Chapter 2 Research

Topic of Literature Review

1. Subject: Kasem Bundit University
2. Direction of Design: New Educational Environment
3. Human Factors
4. Facilities and Data Requirements

1. Kasem Bundit University
   • Organization
   • Goals
   • Types of Users

2. Direction of Design: New Educational Environment
   • Designing learning Services for New Education
     I. Design Criteria to Understand Needs and Curriculums
     II. The Trends to design new educational environment
   • Design Learning Environment based on Organizational Consideration
     I. Discourse Community
     II. Design relationship between organization and users
   • Design Common Spaces
     I. Sense of Belonging
     II. Satisfaction with Interpersonal Relations
     III. How to Create Spaces that Encourage Community Life

3. Human Factors
   • Psychology of Students’ Learning in New Educational Environment
     I. Strategies to Motivate Student with Learning Space
     II. Strategies to Motivate Student in Digital Society
     III. Minor Students among Learning
   • Human Interaction in Intercultural Community
     I. Cultural Action upon The Social Structure
     II. Strategies for Cross-Cultural Communication

4. Facilities and Design Data Requirements
   • Function in Reception and Information Areas
   • Function in The Student Recreation Areas
   • Function in Learning Services Areas
   • Function in Student Affair Areas
   • Network Systems
2.1 Literature Review

1. Kasem Bundit University

1.1 Organization

Kasem Bundit University has managed education institution more than 10 years. To provide graduate for developing our country. The university determinably develops many ways for progressive education such as developing organization, concerning education quality and also developing education environment.

Kasem Bundit University has expended education institution to the new campus (Romklao Campus) concerning the policy of Thai government and supporting the number of students. Kasem Bundit University Romklao Campus is located on 77 Romklao road, Bangkok. The campus is planed for supporting education institution consists of 4 buildings as follow:

- The building 1 for administer
- The building 2 for education facilities
- The building for sports
- Students housing

In the future, the campus will serve for the student whoever he or she wants to study in the new campus.

1.2 Goals

Kasem Bundit University determines to develop students to be the graduate with sufficient knowledge. Therefore, the University supports students’ learning to achieve according to student skills. If student has some problem during learning in the university, student can come to advisor in the university. Motto of the university is “Values - Morals - Common Good”.

1.3 Type of Users

Kasem Bundit University is planned to serve for the student whoever he or she want to study in the campus. Therefore, type of users in student community center is:

<table>
<thead>
<tr>
<th>Type of users</th>
<th>Character of usage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Students</td>
<td>- Students who want to spent there free time at the student recreation ( Food court, recreation area )</td>
</tr>
<tr>
<td></td>
<td>- Students who want to find knowledge in learning resource center.</td>
</tr>
<tr>
<td></td>
<td>- Students who want to find information through internet or media.</td>
</tr>
<tr>
<td></td>
<td>- Students who want to have learning advice from student affair.</td>
</tr>
<tr>
<td>Type of users</td>
<td>Character of users</td>
</tr>
<tr>
<td>--------------</td>
<td>--------------------</td>
</tr>
</tbody>
</table>
| Teachers     | - Teachers who teach students at Romklao Campus.  
               - Teachers who work at student affair. |
| Staff        | - Staffs who work at organization planned in Romklao Campus.  
               - Staffs who work at food court. |
| Other persons | - Other persons who want to the campus for personal affairs. |
2. Direction of Design: New Educational Environment

2.1 Designing Learning Service for New Education

2.1.1 Design Criteria to Understand Needs and Curriculums

Design for the new millennium consist of 6 factor as follow

- Technology
- Distance Learning
- Communications
- Ergonomics
- Community
- Wireless

Designers have power to create and shape the educational environments in term of facilities planning. As the globalization begins, Technology to flow information continues to influence the function and design of the educational building.

Information in educational technologies has radically transformed research and information-processing. Educational environment in the future will serve information as much as we use electricity today. Future student will have access to learning in all sort of environments. Therefore, Universities will offer a host of facilities to explore the environment as well as community for learning. Learning in community will support the university as well as the heart of community.

2.2.2 The trends to design educational environment

Educational community can be the value of the community as well as something that is excellent and smart for a lot of people. Educational community will support students to have vision to students. There are the values of the community:

- Universities will reflect break though technology to meet social and cultural needs with design and construction innovations.
- Universities are the center of the community.
- Universities offer more to communities than deadly community.
- Universities provide social service for a place to meet and learning resource
- Universities are the center role within the community.
- Universities will be shared community facilities and situated in campus for setting along with media center, social-service etc.

The Future Connection to an explosion of information and sharing resources has rapidly changed through tools for learning. This phenomenon has created many factors to influence on the educational environment.

Access to information-management systems and communication technology is already beginning to both alter and support the relationships among students, teachers and formal learning. In university of the future, Students will be more self-directed and hand hand-on in their search for knowledge; teachers will be multidisciplinary and focused on higher-level thinking and problem-solving skills with group and individual participation.
To share resources, Universities will be identified as community center for providing access to information technology and space for performances and meeting. Moreover, universities have to have the place to provide the opportunity and appropriate setting for maintaining the person to person connection that make us human. There are the factor for being fascinating university as follow.

- University libraries may be functioning more as a cyber café but libraries still need to preserve books
- To change the way a college campus is concern. Therefore, Designer recognize to design to accommodate the trends.
- Campus facilities must serve multiple needs and respond to increase time pressures.
- Universities must have flexible facilities in flexible campus
- To accommodate coming technologies as well as a variety of user requirements.
- A recreation center + A food Court
2.2 Design Learning Environment based on Organizational Consideration

2.2.1 Discourse Community

The community college can be seen as a discourse community. Students have many times to develop a common discourse that involves shared knowledge, common purpose, common relationships, similar attitudes and value, share understanding. Therefore, communication for knowledge can achieve their purpose. Understanding discourse in the way is parallel with a social constructionist perspective. As Bruffee (1986) explains, this “assumes that entities we constructs generated by comities of like-mind peers. Social construction understands (these things as community-generated and community-maintained linguistic entities” As Giroux (1983) explain that language was a social event that is defined, and constrained by the culture of the setting in which it is used.

Discourse community consist of 3 factors as follow

- Community college’s mission
  - To sustain students’ effort to be strong presence during students’ life.
  - Language can help students to meet these goals.
- Community competence and boundaries
  - Community may be within it larger discourse community.
  - Students must know in order to use language appropriately.
  - The community can be seen as adopting language.
  - Having open door is a cultural statement about the mission of community college.
  - We need to remember that discover communities overlap and are flexible and locally constituted.
  - Communities have fuzzy boundaries that allow for a good deal of overlap.

- Power and Influence in a Discourse Community
  - By focusing on sharing their knowledge, finding and interpretations
  - Students prefer to see the boundaries as dotted lines, not barriers to community college faculty developing their communication competence within and beyond their discourse community.

2.2.2 Design relationship between the university and students

Perhaps, the most important to encourage life is the relationship between university character and students such as value and commitment. University with character bring unique culture they know they are, have developed a common understand to their purpose and have faith in their ability. The university character builds when curtain virtues are incorporated into culture in four groups as follow.

- The moral virtues – honesty, truthfulness, decency, courage, justice.
- The intellectual virtues – thoughtfulness, strength of mind, curiosity.
- The communal virtues – neighborliness charity, self-support, helpfulness, cooperativeness, respect for others.
- The political virtues – commitment to the common good, respect for law, responsible participation.
2.3 Design Common Spaces

2.3.1 Sense of Belonging

Student’s sense for belonging has 5 factors as follow

- The academic hierarchy
- Satisfaction
- Degree of autonomy
- Orientation to the institution
- Opportunities for students’ development

The academic hierarchy:
The different educational requirement for community college faculty and the lack of emphasis on faculty-conducted is the factors to be a lower place community college because they lack interpersonal relationship.

Community college should reflect the highest levels of meeting. Perhaps, teachers have found something true during meeting their personal and professional needs. These and other studies have also reported on the variety of factors that play a role in determining the relative level of meeting among community college.

Satisfaction:
Satisfaction that community college faculty is relatively satisfied with their interpersonal relationship at work personal relationships enhance their meeting and sense of community.

Degree of Autonomy:
Freedom at campus with the lack of collaboration may also be a factor for creating a sense of isolation among community college.

Community colleges cannot thrive if their faculty feels isolated from one another and form the institution. Community colleges are made up of relationship between the various parties. The parts are not actually separate and distinct but instead intermingling. Finally, the sense of isolation is the implementation of a strong faculty orientation program.

Orientation to the institution:
The university should provide management for first opportunity to impart a sense of the institution’s values and culture. An orientation program is the community college’s opportunity to welcome new students to the community. The process of socializing, inducting, and initiating is all respondents for a formal orientation program.

Opportunities for Professional Development:
To increase knowledge and development skills for students, they have to improved sense of belonging. Student cannot run away from the building community because the building is not for the building for individuals. The university obligation is to do the professional developments needs of faculty.
2.3.2 Satisfaction with Interpersonal Relations

First, Satisfaction is the assumption that the process of individualization can be interpreted in terms of individual emancipation and self actualization. Second, what is the meaning of the emphasis that our individualized society place on labor participation as an indispensable condition for both self actualization and social integration.

The privatization of identity has to be closely connected to the erosion of social and normative frames of reference that traditionally gave meaning to the live and experiences of group and individuals.

2.3.3 How to Create Spaces that Encourage Community Life

At the same time member of every of every society need to be connected and committed to some common good. Connections and commitment are the meaning for students and adults alike find sense and meaning in their live and find the resources needed to persist when times are tough with life’s endeavors.

People really cared about each other, Therefore, Individual initiatives were encouraged and respected and then Motivation and commitment were high. Things got done effectively and efficiently before challenges were met. New ways of operating were invented and then solutions to problems abounded.

The special connections they enjoyed with other people with other people who were seeking the same thing. Some talked about the sense of community they experienced in support groups when they faced a crisis. These experiences are helpful and at least in a vicarious way give us a sense of what community feels like. But are such community experiences authentic or synthetic?

The motivation to support group is based on egocentric love then we may be dealing with synthetic rather than authentic community. Many people participate in support group get their own needs meet. Therefore, Once needs are met or when need are no longer being meet, the motivation for participating disappears In the other hand, motivation is base on altruistic love, then it is unselfish giving to others without expecting something in return. When community ties are based on altruistic love, we are more like to have the genuine.
3. Human Factors

3.1 Psychology of Students’ Learning in New Educational Environment

The fact that prepare students for lifelong learning and information literacy or the ability to locate, manage, critically evaluate, and use information can be useful for students in term of problem solving, research, decision making, and continued professional development. This ability is a vital component of lifelong learning that individuals have opportunity to develop the intellectual abilities of reasoning and critical thinking, and by help them construct thinking for learning how to learn. Therefore, the university has to provide the foundation for continued personal and career growth. However, the creation of learning culture that produce graduates with a capacity and desire for lifelong learning in a rapidly changing.

Increased access to technology has altered the way that students study, while the variety of electronic information resource has widened the potential resource for all students. These developments have reduced face to face teaching in the learning resource and the need to visit the campus community for help.

A framework for planning the development and delivery of information literacy programs across a range of disciplines, using a variety of technologies and reaching an audience dispersed around the globe.

Information literacy philosophy

Philosophical basic of the framework

- The student is central to all teaching and learning, and students are drawn from a variety of culture, economic, educational, and social background.
- The circle surrounding the student is the strategies to develop students before graduation as follow
  - Familiar and unfamiliar situations
  - Solve problems and to apply scientific reasoning
  - Use information technology
  - Function effectively as team members and team leader
  - Communicate ideas both orally and in writing
Christine Bruce developed relational model conceptual information literacy as seven interrelated faces (components), there seven facts are:

- Information technology conception
- Information source conception
- Information process conception
- Information control conception
- Knowledge construction conception
- Knowledge extension conception
- Wisdom conception

The notion of shared responsibility for information literacy was addressed in the development of Information literacy is an issue for librarians. It is an educational, societal and democratic issue which should be the fundamental concern to designer to design learning resource.

Focus groups were conducted to discuss the issues of responsibility for the range of specific information literacy principle was designed as a faculty, library or joint responsibility. Every specific principle was also specified as having some student responsibilities were designed to the learning outcome.

**Information Literacy Responsibilities**

<table>
<thead>
<tr>
<th>Principles of information literacy</th>
<th>Specific information literacy principles</th>
<th>Responsibilities</th>
</tr>
</thead>
</table>
| Accesses information from appropriate sources | - Understand how information sources are structured  
- Select a variety of sources  
- Use library catalogs  
- Use electronic database  
- Use the WWW  
- Develop effective search strategies | - Communication between students  
- Communication between students  
- Library, Student  
- Library, Student  
- Communication between students |

3.1.2 Strategies to Motivate Students in Digital Society

The field of Human computer Interaction (HCI) may apply specifically to educational environments. The origin of HCI and its relationship to other areas of study such as human factor usability and computer interface design are examined. Additionally, the notion of computer as a medium was investigated in order to understand the unique properties of HCI that can answer the question about current HCI issues. It refers to education for digital learning.

Computers are usually viewed as tools or instruments for shearing and finding information but there are suggestions that the computer is a medium, not tool. The use of computer in educational environment increases. Therefore the need for an understanding of computers as a medium brings this kind of complexity to the research.

Definition and history of HCI began in WWII that the psychology of soldiers interacting with weapon and information systems such as signal detection and cockpit instrument displays to understand the interaction between the user and computer. The result is the users’ ability to carry out specific tasks with computer system that focus on two type of memory (working and long-term).

The objective of human factors research is to create in format system a work environments that help make people more productive and more satisfied with their work life. These five primary human factors are

- Time to learn
- Speed of performance
- Rate of errors by users (Nature science and cognitive science)
- Satisfaction
- Retention over time

3.1.3 Minor Student among Learning

The use of educational technology is not only the facilities learning but also provides distance learning to students. Minority student issues and technology education have been independently different each other. The purpose is to make suggestion in the interest of minority student retention through the use of technologies for learning.

To reduce their attrition is expected that implementation of distance education. It will bring in more diverse students as community colleges reach more dispersed students. To reaches a variety of minority students, the challenge to provide them with the opportunity to success in the technological era.

Finding the right balance between the learning styles of different groups and individuals is challenging and time consuming. Finally when create developing and selecting materials, many variables must be taken into consideration.

There strategies can be employed to help bring about the successful use of technology to accommodate the different learning styles of minority students.
3.2 Human Interaction in Intercultural community

3.2.1 Cultural Action upon The social Structure
In mainstream adult and continuing education have 2 factors to discuss. First, there is the fact of adult and continuing education towards individualized response to present day process of social transformation. There changes with reference to the concept of risk society. Second, the tendency of adult and continuing education to increasingly frame these individualized responses in community. These factors provoke a privatization of identity development and may contribute to new forms of social inequality. In contrast with these developments, we emphasize the importance of adult education for social participation and social responsibility. In this perspective we reconceptualize both the ethic and the aesthetic dimension of adult education.

3.2.2 Strategies for cross-culture communication

- Find the acceptance to develop culture perspective among majority group
- Make appreciation to open mind among minority group

Find Acceptance for both minority and majority students to understand each others.
4. Facilities and Design Data Requirements

Facilities and Service Planned in Student Community Center
Student community Building has 2 factors to concern:
- Organization: Respond for the operation of the community
- Character of the Building
  - Approached from both functional and physical concerns.
  - Focused to the Recreational, culture, social and civic life on the campus.
  - To be larger informal to reflect the character of the activities.

Student Centers

- Emphasis of facilities on large-group instruction and on the media to support it.
- To make sense to put expensive “support” functions to gather. It can provide
  I. Shared projection areas
  II. Special and expensive lighting, mechanical systems and electrical installations.
  III. Centralization of production facilities.
  IV. Using presentation and other media.
This site plan of a potential future school features unique, distinct components that incorporate the community into the school setting.

A Community embracing typical facilities usually required at a university for about 6,000 students.

- Food Services
- Social Facilities
- Recreation Rooms
- Small Auditorium
- Meeting & Conference Rooms
- Offices
- Service Auxiliaries
4.1 Function in Reception and Information

Reception Areas
- Communication to organization’s desired corporate image
- The visitor interacts
- Be Attractive
- The Needs of special user groups who must interact with a receptionist.
- Planning Data
  - A reception’s workstation
  - Furniture arrangements
4.2 Function in the Student Recreation Areas

Projection Systems
- Overhead projectors require an electrical outlet.
- Seating and Visibility: Good visibility depends on a large degree upon seating arrangement.
- Avoidance: Obstructions, Slope, Platform, Viewing Distance and Extreme Vertical - Horizontal Viewing Angles.

Main lounge—Used to expand TV viewing area during special event broadcasts, with folding partition open
Furniture arrangement for people's opportunities in social context

Furniture to give the lives and experience

Banquette Seating
- To Permit some form of body contact
- The people hidden dimensions
- Personal space to close the sharing
  Possibly in conjunction with some activity
4.3 Function in the Learning Service Areas

Carrels with mechanical equipment built in, based on a steel or aluminum “X” frame. Frame folds up like a card table, can be used for other purposes as well.

Electronic Requirements

Planning Data: Anthropometrics

- The Microcomputer and the availability of inexpensive package software.
- Related to this new work environment.
- Electronic workstation is responsive to human factor in order to avoid physical discomfort for the user.
  - The location of the keyboard
  - Angle of the visual display terminal
  - The Chair (Adjustability)
  - Field of vision
  - Back Support
  - Height of the seat

All of them can be found in

- A variety of anthropometric
- Ergonomic planning data
- Details for use
4.4 Function in Student Affairs

Furniture arrangement for psychology research

4.5 Network Systems

Nowadays, Internet is important to share information or share entertainment. Therefore access point to connect the servers is one factor that designer should concern for the best design. Access network has 2 types: Wire LAN and Wireless LAN. Wireless is useful to access the computer where it is at limited area or moveable area that means it can access the computer in every area.

For the past several years, Universities have been the earliest adopters of wireless local area network (WLANs) for students and faculties. However, Universities are becoming aware of two problems: security and management.

Connection

To connection (Notebook, Desktop) for wireless system in Wi-iS, Users have to have equipments (Card installed in computer) to access the system such as PCMCIA Card, PCI Card, USB or Notebook Centrino before setting driver and getting ID code + Password.

Equipments for Wireless System

PCMCIA Card for PCI Card
Centrino, No PCMCIA Card

Wi-Is (no line) for PCMCIA

PCI Wireless, No PCMCIA

Palm for Setting up Wi-Is

Wi-Is (USB)
2.2 Case study

2.2.1 Primary Information

KBU Academic Resources Center Pattanakan Campus

KBU Academic Resource Center Pattanakan Campus is located in Chalearmpha Building. 1 floor of the library is around 1350 m². The learning resource consists of 3 floors at 5ᵗʰ to 7ᵗʰ in Chalearmphakeit Building.

Services

5ᵗʰ floor:
- Thesis, research, royal decree, journals (Thai and foreign) and Thai and Magazine (Thai and foreign)
- Office for Administrators (Director and Assistant Director)
- Technical Directors
- Department of media
- Department of tool analysis

6ᵗʰ floor:
- Circulation counter service
- Bag-Drop
- Newspapers
- Books both Thai and foreign
7th floor:
- Circulation counter for media services
- Media services (Videos, recording tapes, CD-ROM, Diskettes)
- Architectural section
- Thesis Books
- Back Issue Magazines
- Photocopy service

Critical Analyses

Good cases

In KBU academic resource center is approach to library in new education environment because it can support users' needs many ways for learning in learning resources. The resource center provides both books and many media services such as Video, recording tape, CD Rom and Diskettes to be the source of learning. Taking about planning, Internet service is in the resource but it is close for full air-condition because users working at IT workstation have more heat gain than readers. Furniture planning is useful for social interaction as it library in the community for learning.

Summary:

- The internet service in the library support new education environment as cyber café.
- Internet center is closed form reading area that mean it is useful for IT working (reduce heat gain form users efficiently)
- Furniture is useful for social and culture interaction but it would be better if furniture planning is flexible for larger group.
- Furniture planning is useful for circulation to stack (user's circulation is important than planning stacks)
Bad Cases

The academic resource center had been build for 8 years before we knew what the new educational environment is. Therefore, the resource center has sources for learning only but it has no environment that suit for learning in globalization.

The resource center is located in the building that is not for education facilities. Therefore, it hardly accommodate non-reading person.

The planning between technology and reading area are not balance concerning users' needs. Moreover IT equipment is still traditional and difficult for social exchange for IT skills.

Summary:

- The planning is not flexible between technology and reading area.
- The community has no social exchange for IT skills of users.
- It equipment is still traditional.
- Design in library can not contribute non-reading person.
- The library does not have group study room.

Case study to use in thesis

Student community center at Kasem Bandit Romklao Campus is another choice for students to select the campus they want to. Therefore, Academic resource center should be the design consideration in term of organization and services as follow.

- 4th floor served for 228 students
- 5th floor served for 320 students
- 6th floor
  - Thesis books area served 30 students
  - General book area served 168 students
  - Recreational area served 8 students
- Magazines
  - Thai Magazines (225 units)
  - Foreign Magazines (180 units)
  - Journals (90 units)
  - Back Issue Magazine (30 units)
- Newspapers area served 12 students
- Number of audiovisual materials
  - Video (3,196 units)
  - Audiotapes (1,607 units)
  - Diskette (1,411 units)
  - CD-Rom (2,170 units)
The Cathedral of learning

The library resource is located in the cathedral of learning at 2nd to 5th floor. Area each floor in the library resource is approximately 2520 m² but 5th floor is approximately 880 m². The library resource consist of 4 floor as follow.

2nd floor

1. Depositary Service
2. Book Drop
3. Check In
4. Check out
5. Circulation Counter
6. Reserved Collection
7. Reference & Information Service
8. New Book Display
9. Br. Martin's Collection
10. Newspapers Collection
11. Research Room
12. OPAC
13. Foreign Books Collection
14. Photocopying Service
3rd floor
1. Foreign Language Books Collection
2. Foreign Fictions, Juveniles and Short Stories Collection
3. Information Service
4. Online Public Access Catalog (OPAC)
5. Babylon Hanging Garden

4th floor
1. The Reference Collection
2. The Periodical Collection
3. Thai Language Books Collection
4. Thai Fictions, Pocket Books, Juveniles and Short Stories Collection
5. Photocopying Service
5th floor
1. Language Lab
2. Circulation Service
3. Computer Language Lab
4. Multimedia Room
5. Cable TV and Motion Picture Corner
Good Cases

The library resource had built for 4 years along with we knew what the new education is. Therefore, the library has many learning service that is accommodate students.

Taking about environment at the library resource, new book display next to both side of circulation counter can reflect the meaning of learning resource center as if the knowledge is so valuable for students’ lift. Hanging garden can provide something fresh as well as the dignity and comfort during trying times. Users have access to both artificial and natural light that make users comfortable.

Many technologies in the library resource are now important for learning in globalization. OPAC (Online Public Access) located at the main circulation with good design is useful for finding library’s material.

Media area with good facility can accommodate students to learning during free time. VCD, DVD, Video, Cable TY, Satellite and internet are all the tools for learning based on recreation.
Bad Cases

The library resource seem to be a new educational environment in term of learning technologies but interaction between users is not as good as what new educational environment is. Under the library is plaza for many shop for the smart set but new educational environment should have students taking in larger community.

Many facilities in the library resource are mostly based on old traditional style. Depositary service is located opposite the main entrance that means users might deposit their bag and go to other place excluding in library. Check in at entrance is not useful to check the number of users per day. Moreover check out is not useful to secure library materials.

Planning in the library resource is not the library for accessing information. At newspapers collection contain back issues but nobody want to know the out-date news as much as up-date news. If someone wants back issue, he or she can come to staff to get them. Furniture selection is mostly the individual carrels and less the group study room. Therefore, the library has not much users in the library resource as much as possible.
2.2.2 Secondary Information

Surat Osathanughah Library

Library is located Rangsit Campus is newly the library that concern about being new educational environment. Therefore the library provides many services of knowledge in the library such as the service of multimedia information service.

The seating capacity of the library is 3,000 seats and the library can be expended in the future.

1st floor

- Information area and security service
- Display south east asia ceramic around the hall.
• Desk service to check out and return books or library materials
• Elevators are in the library.

• Student Lounge: The place for student activities such as reading book or watch TV etc.
Hall of Recognition
- For recognition to the personal that patronize to the university such as sponsor, the president, ex-dean etc.
- Another side of recognition hall is waiting area where users can take views around the building (open space).
3rd Floor

- Another side of elevator is display for prestige.

- Telephone and back drop service are the main entrance.

- Main entrance is accommodated by computer services.
• OPAC installed at main entrance.

• Newspapers area is designed to accommodate users with design.

• Media services consist of 52 Televisions and 16 stereos
- Video service for group consist of 4 rooms (1 room has 8 seats) and personal video service consist of 32 computers.

- Cyber center consist of 92 personal computers and sometimes can be a computer lecture room (60 personal computers).

- Student Lounge 2 is for students working in the university excluding using computer.
4th floor

- Reading area with wireless

- Group study room 10 rooms (1 room has 10 seat) and private study room 4 room (1 room has 2 seat).
Singapore Polytechnic Singapore Library

The library is very suitable to be the case study for new educational environment. It looks modern and efficient for learning in globalization. Contribute visual interest is the method to accommodated users especially students for live-long learning.

1st Floor

Self Service Terminal
Display for New Arrivals

Magazine reading area

Audio Station
Entrance to collect books

Display for New Arrivals
Theatrette

3rd floor

Group Study Room
Featured facilities in the library to use in thesis

1. **Audio Station:**
   - the area provide music CD player and sampling stations

2. **Listen Station:**
   - Students can select the channels they want by the book shelves

3. **Media Center:**
   - The media center provide audiovisual equipment consist of TV,DVD/CD players

4. **Video Zone**
   - There are individual and group viewing station for 32 users
University of Technology - Sydney, Australia

This case is for the new technology of wireless system. Access point is the server to coverage for network that is no line to connect to computer.

Wireless network in UTS is the connection that is no having to connect computer to any hardware. A wireless card and the correct software and drivers are installed on computer or laptop.
Chapter 3  Project Facts

3.1.  Site Analysis

3.1.1  Project Analysis

The campus located on 77 Romklao Road. The site is located on the suburb that can be the new land for developed areas. The campus has approximately area around 40 acre. The campus consists of 4 Building as follow.

- The building 1 for administer
- The building 2 for educational facilities
- The building for sports
- Students Housing

The campus will served to be another choice for students to choose where they want to study excluding patthakan campus.
Accessing to the campus

Now the area around campus is still developing for developed areas. Therefore, the road is still constructed but the road from the centre of town is finished completely. The people can come to the campus by

- By walking
- By private car
- By bus
- By taxi

The campus is located at Min-Buri. Therefore, Culture of the people around the campus has 2 cultures seen clearly. Buddhist and Muslim are around the campus that means students who select the campus to study might be both Buddies and Muslim.
Climates

Temperature is mostly around 25-30 °C. The maximum temperature is around 30-35 °C in April to May.

Sun Path
Thailand is on hot-humid area. Therefore, the sun path move along with the south that means the South is the hot area at the noonday sun time.

Wind
Wind direction is all around 4 side of the building.

Rain
June to October is the month to mostly rainy because a storm from the south-east.
3.1.2 Building Facts

Program: The building 2 has 12 floors (The middle one in picture)

Owner: Kasem Bandit University

Structure: Skeleton construction

Architecture: Mr. Apirat Chuanpricha

Structure Engineer: Mr. Frukeit Chongfuangwithaya

Mechanical Engineer: Mr. Rakchart Sangwong

Electrical Engineer: Shanuan Aerrkan

Location: 77 Romklao Road, Bangkok

Objective: The building for educational facilities
Existing Condition:
- Opening in the building are the source of light, sun, and fresh are and provide opportunities to access to indoor air.
- Food court faces the noonday sun allow daylight penetrated to the area.
- Landscape besides the building can provide evaporative cooling.
- Windows installed in the wall of each floor can provide the daylight to penetrate into the interior.
Construction:
- Skeleton construction (Columns and Beams)
- Ceramic tiles are the finishing both columns and beams

Atriums:
The building has 2 atriums for passive heating, natural cooling and daylight
Daylight:
Because of 2 atriums, the building can take advantage of daylight for psychological contact with the indoors.

Building Site Condition:
Sustainable design:
- The building is design for delighting and natural ventilation so, indoor air quality benefit for users.
- Lighting-colored surface reflect solar radiation.

Building design and climate:
- The building takes advantage of shading from the sun to heat gain.
• Because of building orientation, the east and the west are minimized to reduce solar heat gain.
Kasem Bundit University Romkla Campus

Clear Spaces (Field)

North

Visual interest of the people among the building

NE faces the local community
Car park for Coaches

Car circulation (Noise)

Car park for 387 cars

Entrance for strangers
Exit for the people
Entrance for faculty and students
Wind Direction is all around 4 sides of the building.
Because of building orientation, the east and the west are minimized to reduce solar heat gain.
The building is designed for natural ventilation so indoor air quality benefit for users
3.2 Facilities Study

3.2.1 Organization Structures
Organization Chart of Learning Resource Center

Vice Deputy of Education

Director of Learning Resource Center

Assistance of Director of Learning Resource Center

Technical Department

Department of Distance Learning Materials

Department of Analysis Distance Learning

Department of Developing Data Base

Administration Department

Department of Learning Resource

Service Department

The Check Out/Return Services

Magazine and Journals Services

DataBase Service

Media Service
Organization Chart of Student affair

President

Vice Deputy of Student Affair

Assistance of Vice Deputy of Student Affair

Director of Student Affair

Committee of Student Affair

Administration Office

Student Activity and Development

Student Club

Analysis

Sports Center

Career Development

Residential Life

Cultural Center
3.2.1 User Behaviors

I use questionnaires to find user behaviors in term of using internet among students’ life.

Questions to survey users’ attitude among using internet. Please, choose just one choice that you mostly like.

Part 1 your status

1. Sex
   [ ] Male  [ ] Female

2. Ages
   [ ] 17-20  [ ] 20-22  [ ] 22-24  [ ] More than 24

3. Now, you are studying in faculty of .................................................

4. Do you have computer at your home?
   [ ] Yes  [ ] NO

5. You philosophy is .................................................................

Part 2 your attitude among using internet

6. Please, Arrange in order of your favorite time that you want to come to internet center during your free time. (1-4)
   .......... Before class begins
   .......... After class Finished
   .......... Waiting for next class
   .......... Free day

7. How many time do you normally use computer at internet center?
   [ ] about 0.1 hrs  [ ] about 0.3 hrs  [ ] about 1 hrs  [ ] more than 1 hrs

8. The way that you want to use computer
   8.1 Privacy
      [ ] Strongly agree [ ] Agree  [ ] Disagree  [ ] Strongly disagree
   8.2 Taking with you friend
      [ ] Strongly agree [ ] Agree  [ ] Disagree  [ ] Strongly disagree
   8.3 Shearing information from other persons
      [ ] Strongly agree [ ] Agree  [ ] Disagree  [ ] Strongly disagree
9. Internet is better than information from books in term of
   9.1 Getting update information  
       □ Strongly agree □ Agree □ Disagree □ Strongly disagree 
   9.2 Getting information than you want  
       □ Strongly agree □ Agree □ Disagree □ Strongly disagree 
   9.3 Making you smart  
       □ Strongly agree □ Agree □ Disagree □ Strongly disagree 

10. If you can not access information in internet, you will
       □ do by yourself  
       □ ask your friends in internet center  
       □ ask both your friends and other persons  
       □ other (Please specific) ..............................................

11. Internet in your meaning is
       □ The source for education  
       □ The sharing information  
       □ The learning source  
       □ Other (Please specific) ..............................................

Part 3 your attitude among internet center

       □ Strongly in favor of  □ In favor of  □ Neither in favor of nor against □ Against

       □ Strongly in favor of  □ In favor of  □ Neither in favor of nor against □ Against

14. You want to be in internet center as long as you can.
       □ Strongly in favor of  □ In favor of  □ Neither in favor of nor against □ Against

15. You get information as much as you want.
       □ Strongly in favor of  □ In favor of  □ Neither in favor of nor against □ Against

16. Internet center is the source for education.
       □ Strongly in favor of  □ In favor of  □ Neither in favor of nor against □ Against

17. Information from internet is credible.
       □ Strongly in favor of  □ In favor of  □ Neither in favor of nor against □ Against

18. You are the informationism.
       □ Strongly in favor of  □ In favor of  □ Neither in favor of nor against □ Against
19. Internet center is the place for relationship between you and your friends.
   □ Strongly in favor of  □ In favor of  □ Neither in favor of nor against □ Against

20. Using internet is the one daily task.
   □ Strongly in favor of  □ In favor of  □ Neither in favor of nor against □ Against
### Number of Questionnaires

<table>
<thead>
<tr>
<th>Programs</th>
<th>Numbers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Faculty of Business Administration</td>
<td>31</td>
</tr>
<tr>
<td>Faculty of Engineering</td>
<td>27</td>
</tr>
<tr>
<td>Faculty of Science and Technology</td>
<td>4</td>
</tr>
<tr>
<td>Faculty of Laws</td>
<td>4</td>
</tr>
<tr>
<td>Faculty of Communication Arts</td>
<td>4</td>
</tr>
<tr>
<td>Faculty of Liberal Arts</td>
<td>2</td>
</tr>
<tr>
<td>Faculty of Architecture</td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td>73</td>
</tr>
</tbody>
</table>

![Number of Questionnaires](chart.png)
### Time used at Internet Center

<table>
<thead>
<tr>
<th>Faculties</th>
<th>&lt; 1 hrs</th>
<th>≈ 1 hrs</th>
<th>≈ 0.3 hrs</th>
<th>≈ 0.1 hrs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engineering</td>
<td>6</td>
<td>14</td>
<td>7</td>
<td>0</td>
</tr>
<tr>
<td>BBA</td>
<td>15</td>
<td>15</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Arch</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>Com Arts</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>Arts</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>Science</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>Arts Science</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>0</td>
</tr>
<tr>
<td>Arts Laws</td>
<td>1</td>
<td>3</td>
<td>3</td>
<td>0</td>
</tr>
</tbody>
</table>

#### Times Used at Internet Center

![Bar Chart](chart.png)

- **0%** to **20%**: < 1 hrs
- **20%** to **40%**: ≈ 1 hrs
- **40%** to **60%**: ≈ 0.3 hrs
- **60%** to **100%**: ≈ 0.1 hrs
Favorite time for using computer (BBA Students)

<table>
<thead>
<tr>
<th>Times</th>
<th>Numbers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Before classes begin</td>
<td>4</td>
</tr>
<tr>
<td>Waiting classes</td>
<td>4</td>
</tr>
<tr>
<td>After classes finished</td>
<td>16</td>
</tr>
<tr>
<td>Free day</td>
<td>7</td>
</tr>
</tbody>
</table>

Favorite time for using computer (BBA Students)

Favorite time for using computer (Engineering Students)

<table>
<thead>
<tr>
<th>Times</th>
<th>Numbers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Before classes begin</td>
<td>3</td>
</tr>
<tr>
<td>Waiting classes</td>
<td>3</td>
</tr>
<tr>
<td>After classes finished</td>
<td>16</td>
</tr>
<tr>
<td>Free day</td>
<td>6</td>
</tr>
</tbody>
</table>

Favorite time for using computer (Engineering Students)
### Psychology among Using Computer (Privacy)

<table>
<thead>
<tr>
<th></th>
<th>Strongly in favor of</th>
<th>In favor of</th>
<th>Disagree</th>
<th>Strongly disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Private</strong></td>
<td></td>
<td></td>
<td>47</td>
<td>26</td>
</tr>
<tr>
<td><strong>Simi-Private</strong></td>
<td></td>
<td></td>
<td>15</td>
<td>34</td>
</tr>
<tr>
<td><strong>Publice</strong></td>
<td></td>
<td></td>
<td>23</td>
<td>48</td>
</tr>
</tbody>
</table>

### Students prefer privacy

- **Private**
  - Strongly in favor of: 47
  - In favor of: 26
  - Disagree: 1
  - Strongly disagree: 1

### Students prefer simi-privacy

- **Simi-Private**
  - Strongly in favor of: 15
  - In favor of: 34
  - Disagree: 22
  - Strongly disagree: 4

### Students prefer publice

- **Publice**
  - Strongly in favor of: 23
  - In favor of: 48
  - Disagree: 3
  - Strongly disagree: 1
Psychology of students among society in internet center

<table>
<thead>
<tr>
<th>Number</th>
<th>Strongly Society</th>
<th>Society</th>
<th>Society only</th>
<th>Society &gt; Friends</th>
<th>Friends &gt; Society</th>
<th>Friends only</th>
<th>Privacy</th>
</tr>
</thead>
<tbody>
<tr>
<td>11</td>
<td>24</td>
<td>24</td>
<td>8</td>
<td>4</td>
<td>2</td>
<td>2</td>
<td></td>
</tr>
</tbody>
</table>

Psychology of student among society in internet center

![Bar chart showing the distribution of students' psychology among society and friends in the internet center. The chart includes categories such as Strongly Society, Society, Society only, Society > Friends, Friends > Society, Friends only, and Privacy. Each category is represented by a bar indicating the number of students. The numbers range from 0 to 30, with the majority of students falling in the 20-25 range. The chart highlights the dominance of society in the students' psyche.]
The frequency of using internet

<table>
<thead>
<tr>
<th>Frequency</th>
<th>Numbers</th>
</tr>
</thead>
<tbody>
<tr>
<td>Always</td>
<td>9</td>
</tr>
<tr>
<td>Usually</td>
<td>20</td>
</tr>
<tr>
<td>Occasionally</td>
<td>29</td>
</tr>
<tr>
<td>Sometimes</td>
<td>12</td>
</tr>
<tr>
<td>Rarely</td>
<td>2</td>
</tr>
</tbody>
</table>

The frequency of using internet

- **Always**: 9
- **Usually**: 20
- **Occasionally**: 29
- **Sometimes**: 12
- **Rarely**: 2
3.2.1 General Principles to Design Facilities

Design Principles for Information Area

Concept of Information Area

Information area can reflect the university image that means both students and faculty can be trusted about ideas, values and commitment. In addition, the university image can also make the relationship between campus character and student achievement.
Because of the relationship between campus character and students, both student and faculty have also develop a common understand of there purpose to achieve their goals because they know what they are in unique culture.

Principles for Planning and Circulation

Information planning and circulation should be located at the main entrance and visible for both member in the campus and other persons. In additional, information area is for the visible focal point and center of student work.
Information area has to be concerned in planning for making a positive about the organization and community relationship.

Principles for Aesthetic:

Stimulating space in information area has to planning in information area that all members can realize information. Therefore, information planned in information area has to be something touchable for all members. Recognize and select a variety of potential source is concerned for creation touchable information.
Graphic types are tools for making learning more enjoyable from information as well as effectiveness of screen design. There are the factors to make touchable information.

- Making learning more enjoyable (Effectiveness of screen design)
  - Color
  - Font choice
  - Structure of material
  - Common sense presentation
- Color may serve several purposes
  - To enhance the “personality” of the different function areas.
  - To distinguish between different types of screen information.
  - To establish a link between related piece of information.
  - To highlight important or critical messages
- Font choices
  Certainly providing text that users find pleasant to look at may have a positive transfer to learning and communication. In general, readers prefer text with
  - A serif,
  - A heavy stroke (bordering on boldface),
  - A clearly distinguishing character between letters,
- Substantial width to the letters
- Large, widely spaced characters would be read more easily.

• Organizational Structure
  - Indenting paragraphs or numbering them to make a screen display’s structure explicit.
  - Using bullets to make important points
  - Drawing attention to certain components of the screen text by using larger type, bold type or a different font.
  - By using horizontal or vertical rules and shading
  - And by using the margin for comments or special symbols

• Space Outline
  - Double-spaced text is more effective than single-spaced text.
  - White space creates a sense of lightness to the display.

Avoidance: The combination of red and blue is prohibited because of the two color is extremely visible in spectrums
Design Principles for the Student Recreation Area

Concept of the Student Recreation Area

The members in every society need to be connected and committed to common good. Therefore, the members can find sense and meaning in their live. These are useful for the members when they face a tough time and then brighter day come to them.

Space with communication reflects individuals to encourage and respect each other. Moreover, the members also care each other and than the members have motivation and commitment to achieve their goals together.

Motivation is based on altruistic love. Therefore, it is unselfish giving to others without expecting to return. When community ties are based on altruistic love, students are more likely to be as a dot wrapped by circle of recreation area.

Principles for Planning and Circulation

The student recreation areas consist of food court, recreational area and area for student activities. Food court has to accommodate for dining among many students and faculty. Moreover, it should be the social and gathering space for recreation area and area for student activities. Sometimes, food court and be used for other campus function and for campus activities.

Principles for Aesthetic: Stimulating space in information area

The student recreation for aesthetic has to be design based on the importance of different culture perspective. To find acceptance both majority and minority students is the way to design because many current views on individualization and identity develop to learning each other. This is important for living together.

After find acceptance, all members have opportunities to participate in social context and be present in social place the enable them to connect personal qualities and desires to experience each other.
Design Principles for Learning Resource

Concept of Learning Resource

Learning resource has to reflect high-technologies along with community focus as well as cultural tourism.

Principles for Planning and Circulation

Learning resource should be located at the location and site factor that have social + economic + cultural interaction. Moreover, it should promote through both interior and exterior interests.

The learning resource should be closely related with media area. In additional, it is still to be a smooth interface between books, computer screen and users.

Network systems has to be installed to make a network that have security because we are can not force students to search information from computer but we can block information that we do not want them in learning resource.

New technology for learning in learning resource should be social to provide for those who do not have IT skill as well as user-friend IT.

Circulation for user in learning resource is more important than stack or furniture planning because users want to find knowledge they want and then they normally go to there. In additional, planning is less a place for individual study and more place for team project or group working.

Users at IT workstation create more heat than reader. Therefore, planning to reduce heat gain in leaning resource is one factor to concern. Full are-conditioning at IT workstation is important for planning. The multimedia in learning resource should have acoustic control and thermal control. Suspended ceiling are also employed where both lighting and acoustic control are needed.

Principles for Aesthetic

Increased access to technology has altered the way that students study, while the variety of electronic information resource has widened the potential resource for all students. Therefore, face to face context is the way prepare student for lifelong learning, and information literacy, or the ability to locate, manage, critically evaluate.
Design Principles for Student Affairs

Concept of Student Affairs

Student affair supports students to develop the concept of purpose in students’ life as if they develop students during the college years. In additional, they support students to identify those activities.

Principles for Planning and Circulation

Planning and circulation for student affairs have to have a place for reflecting values, beliefs and purpose to student such as the priority task for job descriptions or incorporate with students’ work. In additional, Area for psychological research is important for asking and listening about existential issues of students. These are the key functions for student affairs:

- Define process for student intake.
- Monitor progress
- Student affair program must develop appropriate institution policies
- Procedures that require procedures
- Support Education Planning

Principles for Aesthetic

Student affairs office should make student trusted in there person value and beliefs. Area for professional can closely to advice student for physical health both behavior and habits. Moreover, Space for students involved in social situations is the factor that makes students shaped by their person value and beliefs.
Chapter 4 Data Synthesis and programming

Program: Student community center Kasem Bundit University Romklao Campus

Area in Student Center
- Information area
  - Main entrance for campus image
  - Information service
  - Stationery
  - Nursing room
- The student recreation area
  - Student lounge for recreation
  - Food shop
  - Kitchen
  - Dining area
  - Student Clubs
- Learning resource area
  - Bag drop
  - Checkpoint
  - Self service returns
  - Display for new arrival books
  - Circulation counter
  - Newspaper / Magazine
  - Audio station
  - Video zone (group and individuals)
  - Media center
  - Internet service
  - Student lounge for working
  - IT Library
  - Reading area
  - Photocopy service
  - Office
    - Administrators
    - Service section
- Student affairs area
  - Area for job description
  - Area for advisor
  - Nursing room
  - Office
    - Administrators
    - Student activity center
    - Learning support center
    - Spiritual center
    - Career development center
    - Residential life center
    - Cultural center
4.1 Area Requirement

1. Information area
   - Main entrance for campus image 50 sq m
   - Display for Campus image
     o 4 Displayers (16) 64 sq m
     o 4 Seating Set (4.5) 18 sq m
     o 25 users (2) 50 sq m
   - Exhibition area 350 sq m
     o 200 users (2) 400 sq m
   - Stationery 162 sq m
     o 1 Counter (6) 6 sq m
     o 10 Shelves (1.5) 15 sq m
     o 1 photocopy machine (1.5) 1.5 sq m
     o 30 users (2) 60 sq m
   - Office of information 81 sq m
     o 2 Staff (2) 4 sq m
     o 2 Tables (0.7) 1.5 sq m
     o 3 Shelves (1.5) 4.5

2. The student recreation area
   - Student lounge for recreation
     o 40 Sofa for 8 (12) 480 sq m
     o Video zone for 400 (1) 400 sq m
     o 50 Video zone for 1 (0.5) 25 sq m
   - Food Court
     o 5 Food shops (16) 80 sq m
     o 5 kitchens (12) 60 sq m
     o Dinning area for 2000 (0.4) 800 sq m
     o Flexible for students activity for 1500 (0.4) 600 sq m

3. Learning resource area
   - Main entrance
     o Bag drop 16 sq m
     o Checkpoint 4 sq m
     o Self service returns 0.5 sq m
     o 2 Display for new arrival books (5) 10 sq m
     o Circulation counter 10 sq m
     o 8 OPAC (1) 8 sq m

   - Newspapers & Magazines
     o 1 Newspaper stacks 1.5 sq m
     o 10 Individuals reading newspapers 12 sq m
     o 1 sofa at Newspaper for 12 sq m
     o 22 Thai magazines, 15 sq m
     o 30 back issue magazine, 2 sq m
     o 90 Journals, 6 sq m
     o 180 Foreign magazines 12 sq m
   - Learning Services
     o 20 listening stations (1) 20 sq m
     o 20 users in listening stations (2) 40
- 50 Medias (TVs) 50 sq m
- 50 users in medias (2) 100 sq m
- 140 Internet service (1) 140 sq m
- 140 users in internet center (1.2) 180 sq m

- Reading Room
  - Student lounge for working: - 20 tables for 10 (4) 80 sq m
    - 80 users in SL for working 80 sq m

- 10 Group study rooms (16) 160 sq m
- Photocopy service : 16 Sq m
- Office : 84 sq m

4. Student affairs area
- Area for job description, 4 sq m
- Area for advisor, 2 sofa 24 sq m
- Nursing room - 10 beds 25 sq m
  - Services 30 sq m

- Office
  - Administrators (4 Staffs) 64 sq m
  - Student activity center (2 Staffs) 16 sq m
  - Learning support center (4 Staffs) 16 sq m
  - Spiritual center (3 staffs) 16 sq m
  - Career development center (3 Staffs) 16 sq m
  - Residential life center (4 Staffs) 16 sq m
  - Cultural center (2 Staffs) 16 sq m

* (XX) is 1 unit
### Relationship Requirement

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<tr>
<th>Requirement</th>
<th>Relationship</th>
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<tr>
<td>Main entrance</td>
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<tr>
<td>Student Lounge</td>
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<td>Information service</td>
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<td>Stationery</td>
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<td>Student lounge for recreation</td>
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<td>Food shop</td>
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<td>Student Clubs</td>
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<td>Bag drop</td>
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<td>Newspaper / Magazine Area</td>
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<td>Audio station</td>
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<td>Student lounge for working</td>
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<td>Photocopy service</td>
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<td>Student affairs area</td>
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Chapter 5 Design Solution

Concept: The community as an "ideological construction"
- Concerns with fragmented aspects of society suggest that community is homogenizing, and has a tendency to mask "the plural and unequal nature of communities".
- Placement implies a tension between "direct common concern" or upward force.
- Community has a mediating function between agency and social structure, and the concept inevitably implies a degree of conflict or regulation.
- Community represents a tension between structure and action.
- Each person experiencing a unique community based on his or her networks.
- Idea of community allows for the emergence of local structure and meaning without claims of transcendental entity.

Ideological Construction
- An essential consideration for adult educations.
- The intersection of community and literacy which seem to hold the most obvious implications for other forms and of adult educators.

3 D View

Conceptual Model
First Floor Furniture Lay-Out Plan
Second Floor Furniture Lay-Out Plan

Scale 1: 400
Food Court
Internet Service Room
Learning Resource Center and Circulation
Newspapers Area
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