

## Guidelines to Increase Efficiency of the Public Services in Rangsit Center of Thammasat University

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### Abstract

This research article is aimed to 1) study characterization of the public services and their utilizations by students in Rangsit Center of Thammasat University, 2) study students' satisfactions and demands on development of the public services, and 3) propose guidelines for increasing efficiency of the public services. From research results, it is found that Rangsit Center provides the public services of transportation in form of setting road systems, entrance-exit gates, public transportation systems, bus stops, and traffic signs. The university also provides recreation and sport services that can be divided into 3 types: exercise area, public park area for recreation, and activity or recreational area with beautiful landscape, totally 26.5% of total area. For students' opinions, they have a low satisfaction level on speed of the public services of transportation. They have a high demand level on increasing number of the public buses and on increasing speed of the public services of transportation as well as on regularly improvement and maintenance for recreation places and sport stadiums. Therefore, guidelines to increase efficiency of the public services of transportation should focus on developing public transportation systems, bus stops, and walk- and bike-way, whilst the guidelines to increase efficiency on the public services of recreation and sport is to provide and increase the seats in required places, regularly improve and take care for the public places, as well as increase a variety of activities on those places.

Keywords: public services, transportation, recreation and sport, Thammasat University, Rangsit Center

### 1. Introduction

Rangsit Center of Thammasat University has been established since 1986. In 2011 university has over 30 offices and faculties served as an important educational hub of Thailand producing many of high-quality graduates. In 2009 there were about 7,470 graduates from all fields of study. Mission of university not only focuses on academic excellence, but also on importance of the development as can be seen from the guidelines of the university's development to become a management center and excellent university since 1996, and from development of the public services system.

Considering development on the public services system in university as for transportation purposes (such as supplying NGV-gas bus, minibus, managing parking lot.) and as for purpose of recreation and sport (such as construction of public park, opening sport stadium services.), those are considered as an area development that affect quality of life of students in term of safety and convenience for their lives. However, the previous implementations are lacked of considering their satisfactions and truly demands. These have

resulted in many problems; for example, insufficient of the public bus. In addition, it was unable to clearly identify on effectiveness of internal management in university.

This research article would help us to gain insight into characterization of the public services and their utilizations by students, which will be useful for analysis of student satisfactions and demands on development of the public services in the area. These lead to the objective of the guidelines for increasing efficiency of the public services in consistent with demand and raise student satisfaction levels in Thammasat University, Rangsit Center according to the 6<sup>th</sup> research strategy on development of performance and potential levels in government agencies and private sectors under the 1<sup>st</sup> research strategy on creation of potential and ability level for social development in the policies and strategies from the National Research Council No. 8 (2012-2016).

## **2. Objectives**

1) To study characterization of the public services and their utilizations by students in Thammasat University, Rangsit Center.

2) To study students' satisfactions and demands on the public services development in Thammasat University, Rangsit Center.

3) To propose guideline to increase efficiency of the public services in consistent with demands and raise student satisfaction level in Thammasat University, Rangsit Center.

## **3. Literature reviews**

Related theory and concept on this research are concept of the public services, satisfaction, journey, and area management in the public park.

### **1) Public services concept**

Public services are activities provided by management to meet overall demands of people in term of safety and convenience for their lives. Target of the public service is to serve in equality, on time, sufficiency, continuity, and progression. There are various ways of service improvements including setting a service standard, providing information, improving regulation, improving system and service process, developing human resource, and improving technology and supporting equipment and supplies.

### **2) Satisfaction concept**

Satisfaction is feeling or attitude having an effect on what one thing or related factor that previously experienced. Satisfaction will exist when individual gets response. That feeling will reduce or not exist if those demand or aim does not get response. Measurement on satisfaction can be carried out in many methods, such as using questionnaires, interview and observation.

### **3) Journey concept**

Journey is moving from one point as a starting point of journey to another point as a destination with a specific purpose. The purpose of journey is classified into 2 types: single purpose and multiple purposes. The journey type is classified into 3 types: by any vehicles, foot, and bicycles. The decision to choose the journey form for individual depends on many factors including distance, cost, timing, and convenience.

#### 4) Public park area management concept

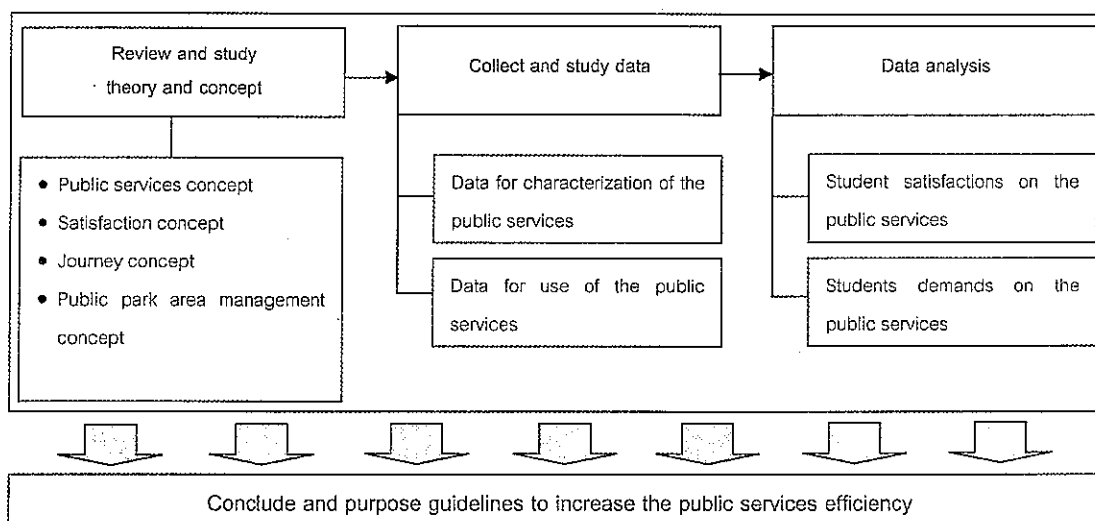
Public park area is area gathering people in city or community to meet, exchange ideas, interact between people in community or city. It is also used for recreation place or doing activities together. Behavior on using of the public park is in relationship with its physical factors including access, size and shape, maintenance, quality and quantity of the areas, activities, and nature component. Design concept of the public park area should consider ability to response user and reducing conflict among those who use the areas.

#### 4. Scope of Work

Scope of work is divided into two aspects: 1) Area covering the areas in Thammasat University, Rangsit Center located in Tambon Klong Nuang, Amphur Khlong Luang, Pathumthani Province, with 1,758 Rai or approximately 2,812,800 square meters and 2) Content of the public services in university divided into 2 types; the public services for purpose of transportation and for that of recreation and sport because those public services directly affect quality of students lives in term of convenience and safety in their lives as well as health and mind as a principle of the public services for people.

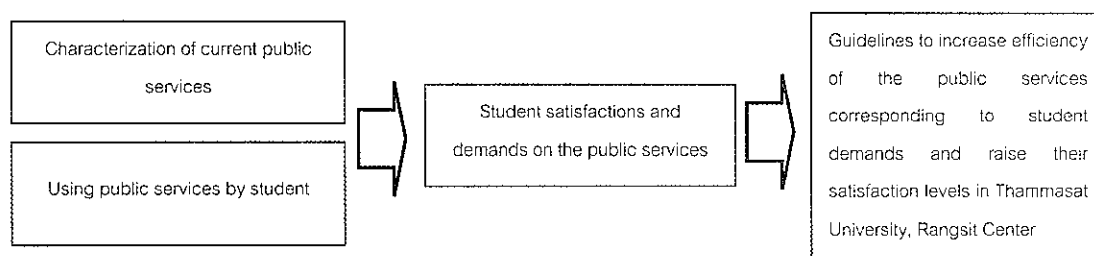
#### 5. Research method and framework

Research method is composed of 4 stages: 1) review and study theory and concept, 2) collect and study data, 3) analyze data, and 4) conclude results and purpose guidelines (Figure 1). Therefore, our research framework is to study characterization of the current public services and their utilizations by students in university which will be beneficial to analyze student satisfactions and demands on the public services in Thammasat University, Rangsit Center. They will lead to set guidelines to increase efficiency of the public services in consistent with demands and raise satisfaction levels of students in Thammasat University, Rangsit Center, accordingly. (Figure 2)



Source: from reviewing and studying of the related concept and theory

Figure 1 Research method



Source: from reviewing and studying of the related concept and theory

**Figure 2** Research framework

## 6. Research Tool

Research tool is divided into 2 sections; field survey and making questionnaire

**6.1 Field Survey:** It is divided into 2 periods: before flooding in 2011 (July 2011) and after flooding in 2011 (January 2012)

**6.2 Questionnaires:** It was processed on July 2011 by setting Target Population on specific groups of students including undergraduate and graduate students at all grades and faculties who are studying in Thammasat University, Rangsit Center because they are main populations who directly related with the public services in the university. From 20,769 students in academic year 2010, we get population sample sizes totally 393 sets based on the sample size setting by Taro Yamane formula with 95% confidence. The questionnaire is open-end question and close-end question dividing into 5 parts: general data of respondents, data of the public services, data of users satisfactions on the public services, data of demanding in development the public services, and additional ideas.

## 7. Results and Discussion

Results are divided into 4 aspects: characterization of the public services, use of the public services, student satisfactions on the public services, and student demands on the public services. The details are as follows:

### 7.1 Characterization of the public services

#### 1) The public services for transportation

The public services for transportation are considered as road systems, entrance-exit gates, public transportation systems, bus stops, and traffic signs.

- **Road system.** Road system in Thammasat University, Rangsit Center consists of (Figure 3)

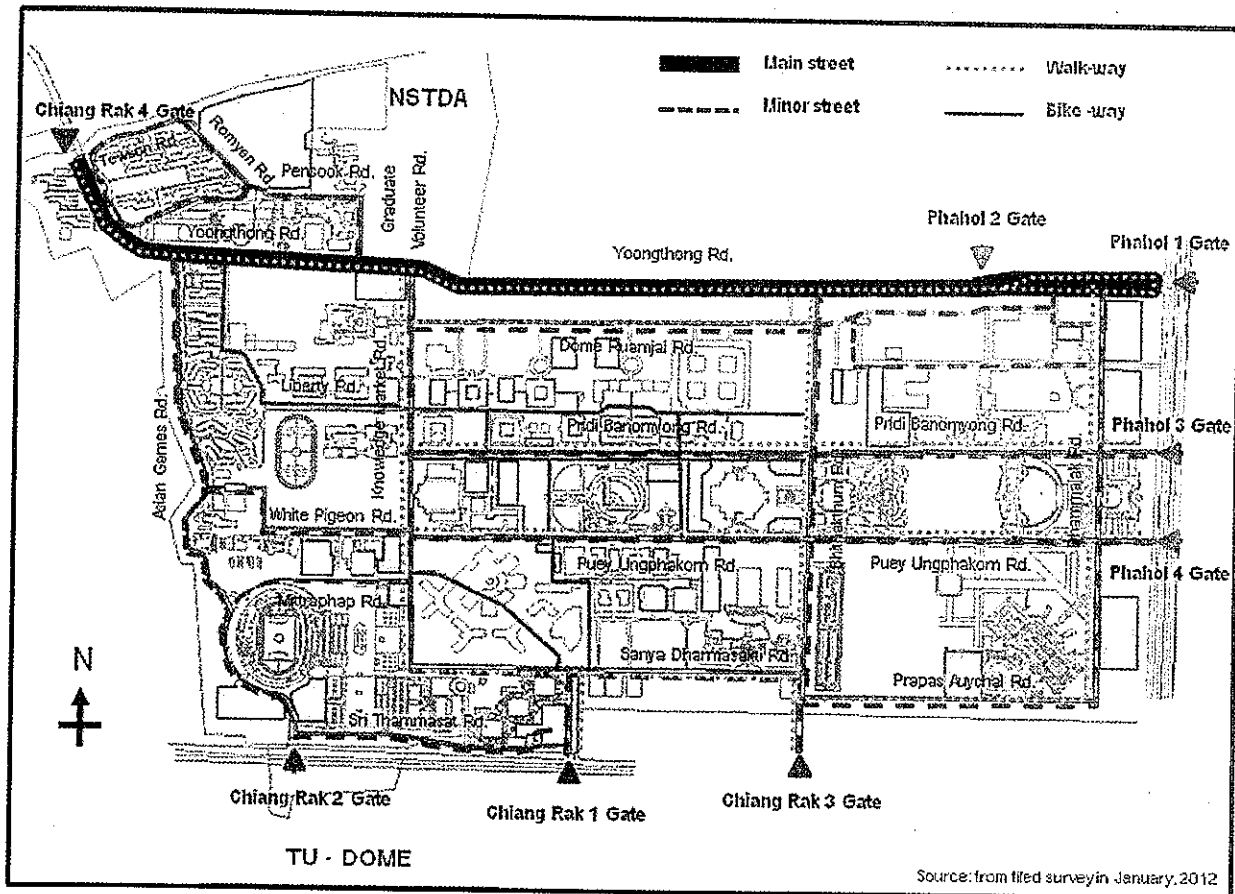


Figure 3 Road system in university

- Main street includes Yung Thong Road served as regularly in-out bus lane. They are also a way accessing to important university agencies, such as Dean Office, Dome administrative building, etc. The roads are about 30 meters width and buses are operated in two-way directions.
  - Minor streets include Dhammajak Road, Bhithakthum Road, Puey Ungphakorn Road, and so on. Traffic conditions are very crowded especially in rush hour. These streets are operated in two-way directions, except one-way for Puey Ungphakorn Road.
  - Sub-minor street include road passing in front of school buildings. Number of cars is not awful.
  - Walk- and bike-way existed as a result of guidelines to encourage people in university to walk by foot or taking bike instead of using petrol. These cause construction of walk- and bike-way to be connected in between buildings or any important places.
- **Entrance-exit gates.** There are totally 8 entrance-exit gates. The 6 gates are opened for the general transportation including Phahol 1 Gate, Phahol 2 Gate, Phahol 3 Gate, Phahol 4 Gate, Chiang Rak 1 Gate, and Chiang Rak 3 Gate.

• **Public transportation systems.** They are divided into 2 systems: public transportation systems connected to transition areas and public transportation systems within Area.

- Public transportation systems connected to transition area include public bus and air-con public van. The air-con public van serves for 4 routes: Route 1 Thammasat University, Rangsit Center-Victory Monument, Route 2 Thammasat University, Rangsit Center-Tra Phrachan Center, Route 3 Thammasat University, Rangsit Center-Future Park Rangsit, and Route 4 Thammasat University, Rangsit Center-Metropolitan Rapid Transit at Chatuchak Station. National Science and Technology Development Agency (NSTDA) is responsibility for Route 3, while the Vehicle and Mass Transit Unit, Rangsit Division is assigned to supervise the private sectors' operations for Route 1, 2, and 3.

- Public transportation systems within the area include of public motorcycle, NGV-gas bus, and minibus. It costs 10 and 15 baht for the public motorcycle depending on distance and covering all routes in the area. This is a responsibility of the Security and Traffic Units, Building Office, Rangsit Center. The NGV-gas bus serves for 4 routes. The passengers are not required to pay expenses for these services. The minibus serves for 3 routes with 4 baht for service charge along the route. Both NGV-gas bus and minibus operated by the private sectors are controlled by the Vehicle and Mass Transit Unit, Rangsit Division.

• **Bus stops.** They are scattering in front of the most important places in university, such as in front of classroom buildings of Faculty of Social Science, in front of Canteen Center. Distance of bus stops from point to point is about 50-100 meters.

• **Traffic signs.** They are composed of a regulatory signs (such as, No turn right.) warning signs and guide signs (such as, distance signs.). For traffic signs one can find them on the floor and pavement, such as forbidden area and pedestrian crossing.

When considering the above characterization of the public services after flooding in 2011, it has been rather affected as seen from damages of bus stops, traffic routes deteriorations and damage of NGV-gas bus. However, those impacts did not affect the services after February 2012 because the reconstruction to recover them to normal situations has been expedited.

## 2) The public services for recreation and sport facilities

Two main agencies that responsible for includes Buildings Administrative Section, Buildings Office, Thammasat University - Rangsit Center and Property Management Office of Thammasat University. The services areas are divided into 3 forms: exercise area, public park area for recreation and activity or recreation area with beautiful landscape with following details (Figure 4):

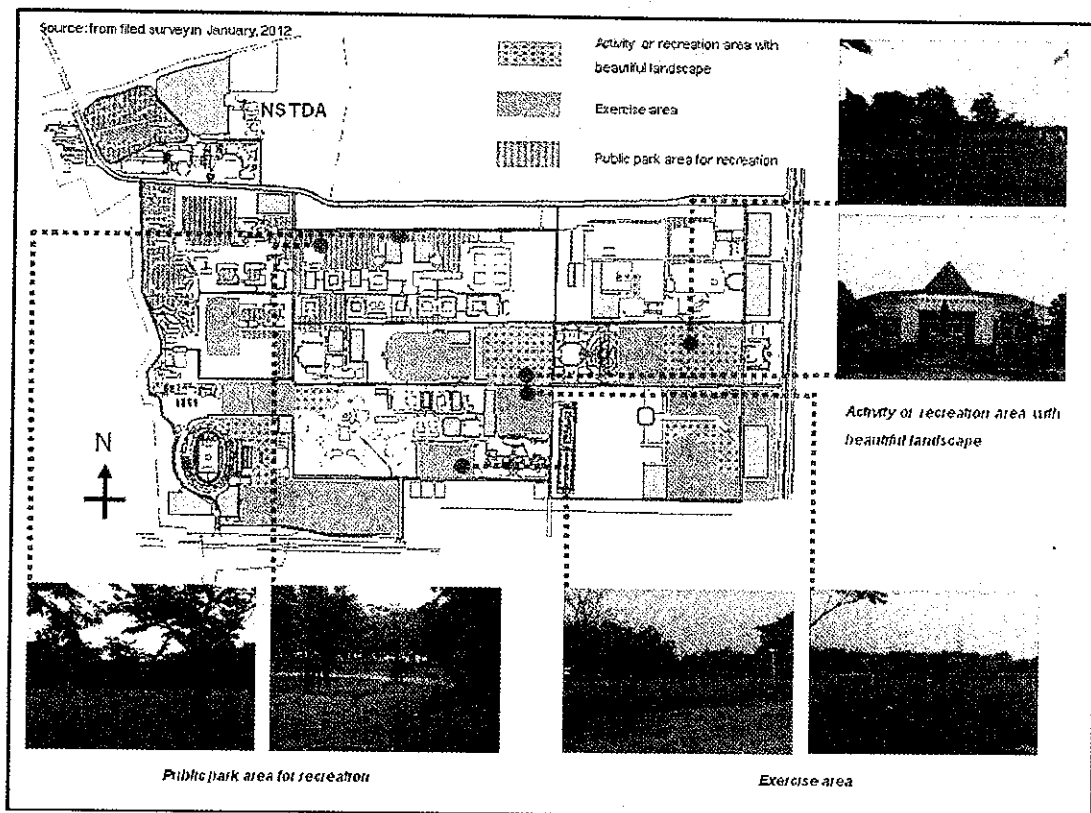


Figure 4 Area for the public services of recreation and sport.

- **Exercise area** includes indoor and outdoor areas: rugby and football field in front of Faculty of Engineering, softball field, outdoor exercise area and healthy garden area around Institute for Small and Medium Enterprises Development (SMEs), playground area around the Asian Games dormitories zone B, gymnasium building 7, football field around student dormitories' zones, gymnasium building area and Water Sport Center.

- **Public park area for recreation:** small home garden area in front of Dome Administrative Building, Dean Office, small home garden area connected to Lecture Hall 1 and Library of Rangsit Center, and Puey Ungphakorn Library, area around the entrance of Lecture Hall 2, rear- and mid-side area of Lecture Hall 3, small home garden area along buildings around Thammasat University Hospital, small home garden area around Asian Games Dormitory Zone C, small home garden area around Institute of East Asian Studies, and small home garden area around students' internal dormitory, and small home garden area around Buddha Pavilion.

- **Activity or recreation area with beautiful landscape**, such as area in front of buildings of Dentistry Department of Hospital, area in front of Faculty of Social Sciences, area for activities around Institute for Small and Medium Enterprises Development and area around gymnasium building 1, area in front of gymnasium building 2 and Phayanak's plaza area.

Comparing the scale of 3 public services forms as above described with 1,758 Rai or approximately 2,812,800 square meters to the whole university area, one find that the public services area of recreation and sport covers 458 Rai or about 733,279 square meters, or 26.5% from total area of university (Table 1).

**Table 1** Size and scale of the public services in Thammasat University, Rangsit Center

Type	Size		
	Rai	Square Meter	%
Exercise area	234	375,053	13.31
Public park area for recreation	131	209,780	7.45
Activity or recreation area with beautiful landscape	93	148,446	5.29
<b>Sum of the public services area</b>	<b>458</b>	<b>733,279</b>	<b>26.05</b>
Area for other purposes	1,300	2,079,521	73.95
<b>Total area for our case studies</b>	<b>1,758</b>	<b>2,812,800</b>	<b>100.00</b>

Source: from calculation by geographical informative system and field survey in 2011.

The public services for recreation and sport facilities after flooding in 2011 are damaged as 100% from the original or existing area resulting from long term flooding with high acidic water conditions. The initial step for reconstruction is to remove, clean and collect garbage by hiring contractor from private sector. After that, planting and area decoration starting from growing grass and restoring trees in urgent area, namely, area in front of Dom Administrative Building, area in front of National Science and Technology Development Agency (NSTDA) and area around Faculty of Social Science because those areas are considered as university symbol and served for many students and staffs. On the other hand, recreation and sport facilities in university can provide their services as usual after June 2012 onwards.

## **7.2 Use of the public services**

### **1) The public services for transportation**

Students prefer to use the public services more than 3 journey forms (42.07%) following by minibus and NGV-gas bus (24.10%). The first priority for their purposes is to go to class (79.49%), to dorms (11.42%) and to university market (2.96%). Average of journey frequency by the public services is 6-10 times a week (47.78%) and the public services are peaked between 08.01-14.00 and 17.01-20.00 (21.78%). The use of the public services after flooding in 2011 still remain the same as before flooding.

### **2) The public services for recreational and sport facilities**

Most respondents sometimes use recreational and sport facilities in university (51.8%), they also use once or twice a week (or 23.47%), and once or twice a month (or 9.51%). The public services are peaked at 17.01-20.00 (62.58%) and timing to use the public services is 30-60 minute (54.12%). The respondents have many activities in recreation area, such as for exercise, meeting, jogging, and relaxing. Situation for using the public services after flooding in 2011, from January to April 2012, is found to be significantly changed as a result of building deterioration and under renovation. The use of stadium is then not found. The outdoor exercise, such as playing football, can be found around dormitory areas. For the purposes of meeting, exchanging of knowledge, and group working of students, activities can be found mostly around dormitory building and area under classroom building.

### 7.3 Student satisfaction on the public services

#### 1) Student satisfaction on the public services for transportation

Most respondent satisfactions are in a medium level or 40-70% for all the aspects, except speed of use of the public services as their satisfactions are in a low level or 41.01% (Figure 5).

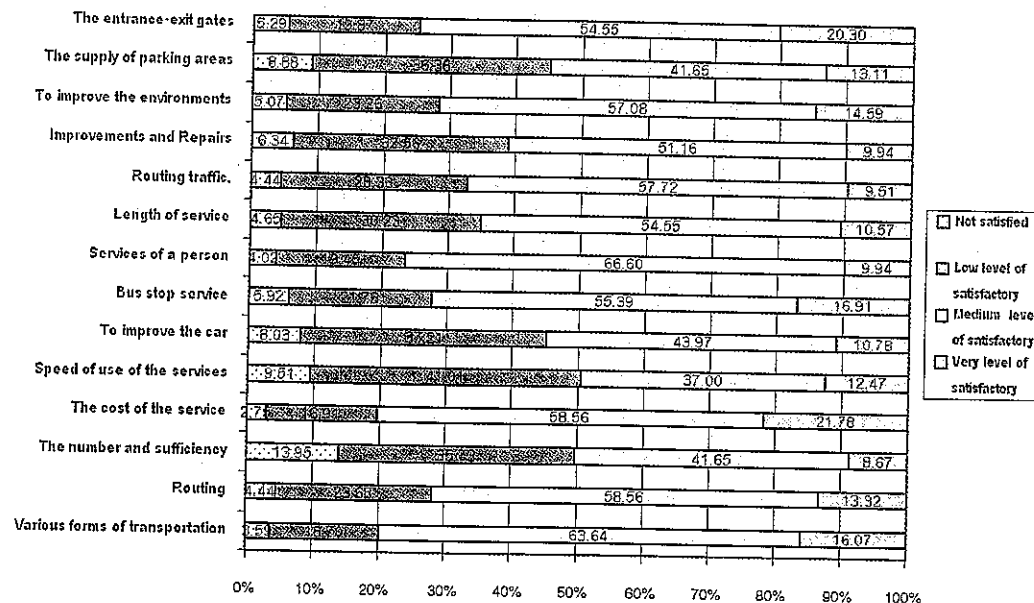


Figure 5 Percentage of student satisfactions on transportation

#### 2) Student satisfaction on the public services for recreational and sport facilities

Most respondents satisfactions are in a medium level or 45-70% for all the aspects. Especially, their satisfaction on convenience of transportation is in a medium level or 66.17% (Figure 6).

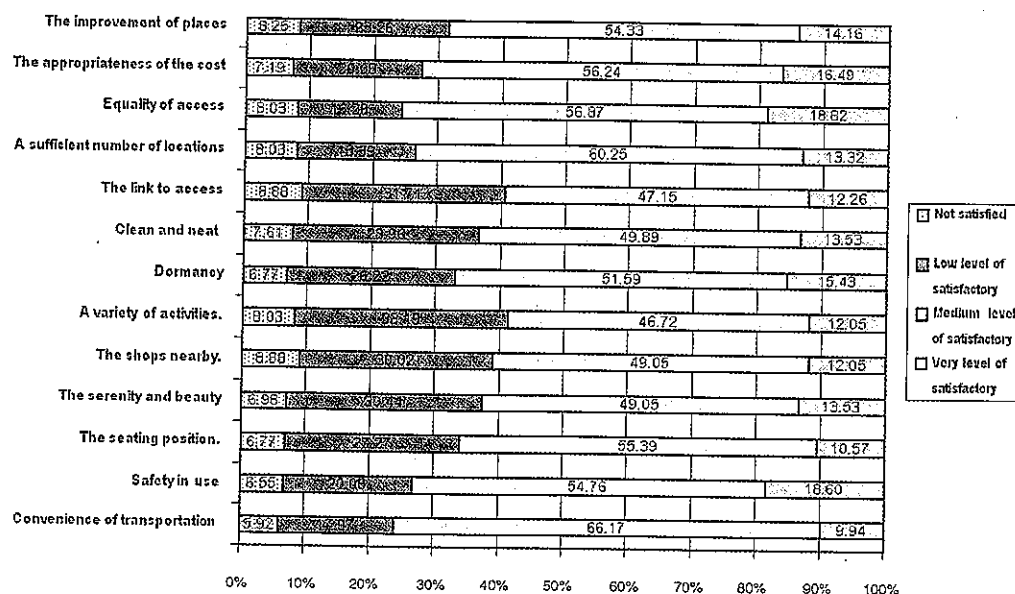


Figure 6 Percentage of student satisfactions on recreation and sport

## 7.4 Student demands on the public services

### 1) Student demands on the public services for transportation

Respondents need a high development level for increasing number of public bus (46.72%), increasing speed of using the public services for journey purposes (46.30%). On the other hand, they need a medium development level for remaining aspects (Figure 7).

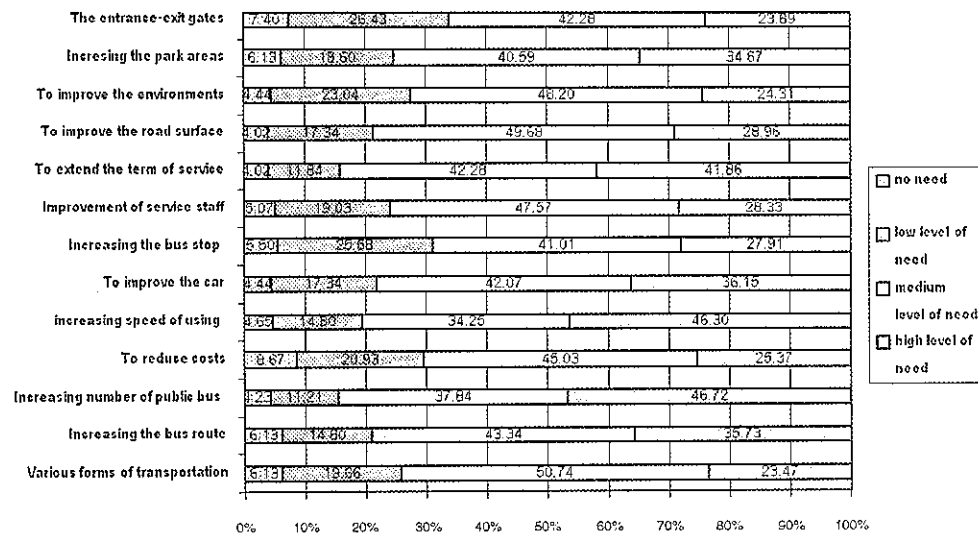


Figure 7 Percentage of student demands on the public services of transportation

### 2) Student demands on the public services for recreational and sport facilities

Respondents need a high development level for improving and regularly caring for places for recreational and sport facilities (40.80%). On the other hand, they need a medium development level for remaining aspects (Figure 8).

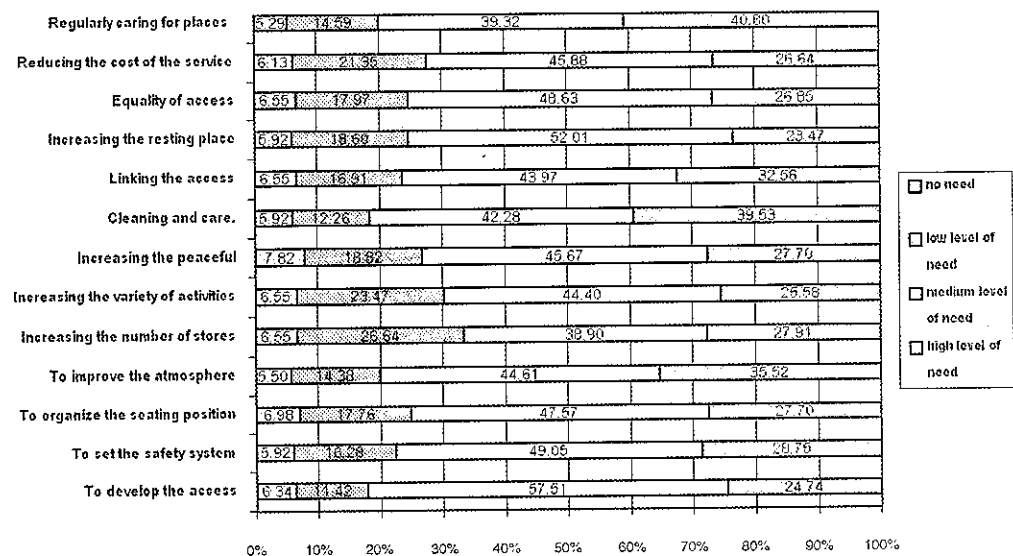


Figure 8 Percentage of student demands on the public services of recreation and sports

## 8. Conclusion and recommendations

From given results of this study, we conclude that Thammasat University, Rangsit Center provides the public services for convenience and safety of students' life as seen from characterization of the public services of transportation and those of recreation and sports events in the university. Nevertheless, compared these results on using of the public services, satisfaction and demand on the public services to the relevant ideas and theories, it is found that the public services for transportation purposes have not yet to reach their goals in term of sufficiency and on time as seen from results of respondents having a low satisfaction level for the public services speed and a high demand level for increasing number of car and increasing speed in using the services. Also, from field survey and observation, one finds that many passengers have to wait in line for long for public buses, and numbers of passengers are very crowded on each bus.

Regarding the public services for recreational and sport facilities, these have not yet to reach their goals in term of continuity and progression as seen from results of respondents having a medium satisfaction level for all matters and a high demand level for regularly improvement for the public services. Moreover, from field survey and observation, one finds that the public services areas for recreation and sport purposes are still in deteriorated conditions, and there are small number of users.

From the above conclusion, guidelines to increase efficiency of the public services in future would be as follows:

### 1) Increasing efficiency on the public services for transportation

- **Development of the public transportation system.** The university should increase number and frequency of services for public van and NGV-gas bus, such as increasing number of NGV-gas from 25 buses to be 30 buses, increasing frequency of public van from every 30 minutes to be every 15 minutes for rush hours. In addition, regularly maintenance and improvement the bus condition to be ready for the NGV-gas bus services are required.

- **Development of bus stops.** When considering the current bus stops; one finds that they are covered in all important places in university and, a distance from building is not more than 100 meters where people can go by foot within 5-10 minutes. As the present characterizations and conditions of the bus stops are quite deteriorated and damaged, repair and maintenance bus stops then is urgently needed. In addition, the university should prepare building layout label in university and routes label of the public services in specific areas and in good condition for every bus stop. For private parking lot, the university should further provide them for graduate students only and also appropriately limit the car number and specific areas where are considered as their meeting points, such as canteen center, Faculty of Social Sciences, to encourage students for not using their private cars.

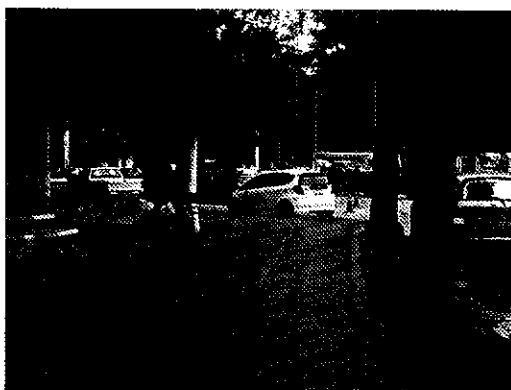
- **Development of walk- and bike-way.** Walk- and bike-way would create a variety of the traffics, reduce accidents and petrol saving. Since, the walk- and bike-way in some areas such as bike-way to TU Dome, walk-way between Faculty of Engineering and that of Social Sciences, are rarely in the use of service, one should encourage students and staffs to see how importance they are. In addition, there should regularly develop and improve area to be ready use, such as shading by planting trees or making roof, improving surface of walk- and bike-way. (Figure 9).



Before



After



Before



After



Before



After

Figure 9 Example of guidelines of walk-way and bike-way development.

## 2) Increasing efficiency on the public services of recreation and sport

- **Regularly improve and maintain any places of the public services.** The university should further improve and maintain any places, such as regularly cleaning the places, decorating and caring for trees in the outdoors public parks, painting and repairing gymnasium, providing and caring for fitness equipment, bench in public parks and in gymnasium.

- **Providing and increasing the seats in any places.** The most popular activity for recreation is chatting, idea exchange, reading, and group working. From field survey and observation one finds that most public parks are located far from dormitory. Furthermore, there are also small recreation areas around school buildings. To increase efficiency of the public services of recreational and sport facilities, the responsible agencies should provide and increase the seats in any places, such as increasing benches around areas of Faculty of Social Sciences, increasing benches in public parks, and increasing benches under school buildings and dorms.

- **Increasing a variety of activities for children and adults in any places.** Respondents sometimes use these places for recreational or sport purposes. Increasing a variety of activities, such as setting children's playground area, providing fitness equipment, supplying aerobic exercise, organizing music event in the garden, can encourage further people coming to use such recreational and sport services.

### Acknowledgement

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