

Study on User Satisfaction in Sport Site Facilities for Senior Students of Elementary Schools in Taichung City

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Abstract

This study has discussed senior students' actual use and satisfaction towards school sport field facilities in elementary schools of Taichung City. This study adopted questionnaire method and senior students in elementary schools of Taichung City were used as research subjects which were sampled with stratified cluster sampling method. The obtained data were analyzed by descriptive statistics, Chi-square test, T test, one-way ANOVA, and Pearson product-moment correlation. It is expected to provide reference for relevant personnel so as to provide the ideal campus sports environment.

Keywords: School Sports Site Facilities, Use Condition, User Satisfaction, Requirements for Improvement

1. Introduction

1.1 Background

Over recent years, many countries have tried to increase the amount of student physical activities in order to enhance general nation competitiveness. Article 1 of the "National Sports Act" stipulates that: "The implementation of national sports serves to strengthen the physical fitness of citizens, nurture national morals, expound ethnic spirit and fulfill the lives of the general public." [1] Good attitudes and habits towards sports shall be cultivated from childhood as stipulated in Article 6 of the "National Sports Act": "Schools at the high school levels and under and the first three years of five-year colleges should provide time slots for the daily participation of sports activities, aside from sports classes, with weekly participation of over one hundred and fifty minutes, while students are on school premises."

1.2 Motive and Purpose

According to the report from the International Obesity Task Force (IOTF), the obesity rate of children and

teenagers between the ages of 6 to 18 in Taiwan ranked the highest in Asia with 26.8%. In 2007, the Ministry of Education (MoE) took statistics on the height of students between Grade 4 and 6 from 2004 to 2006. The average student height showed negative growth for 2 consecutive years. Based on MoE's statistics in 2006, the physical fitness of students in domestic junior high schools and elementary schools fell behind neighboring countries in Asia, namely China, Japan and Korea [2]. If the learning results of our next generation are affected by poor physical fitness and health, we will lose international competitiveness and future of the nation in long term [3].

In order to encourage students' motivation and interest in sports and cultivate the habit of regular sports, as well as consolidating ability and attitude of life-time participation in physical activities, the MoE proposed the "Get Active Quick Project" in 2007, where students were expected to exercise a minimum of 30 minutes per day and 210 minutes per week, so interest in sports could be developed. This research targeted on senior students of public elementary schools in Taichung City for discussion on use condition of school sports site

facilities, user satisfaction and requirements for improvement, so adequate suggestions could be made to the education authorities and administration unit in schools. Base on the above-mentioned background and motive, the objectives of this research are as follow:

- Discussion on the perception of senior students of public elementary schools in Taichung City towards the use condition of school sports site facilities and user satisfaction.
- Discussion on variables of different student background against difference between use condition and user satisfaction towards sports site facilities, as well as the degree of relevance between the two.
- Provide relevant suggestions on school sports site facilities for senior students of public elementary schools in Taichung City.

2. Design and Implementation

Based on the background and purpose, this article designed the structure of the research, where credible questionnaires were edited as a tool of investigation and objective data were collected through sampling. The data acquired were analyzed at the final stage and the current status of the research was revealed. The research structure is shown in Fig. 1. There are a total of three sections in the Chapter, namely tools, participants, data processing and analysis.

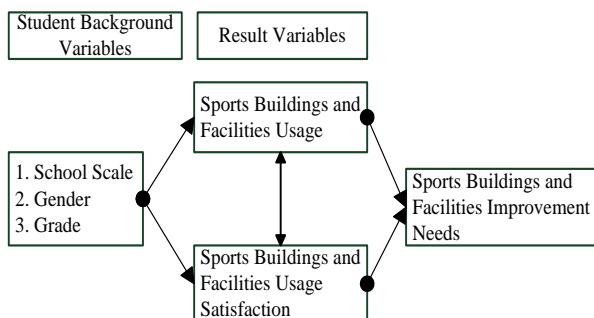


Fig. 1. The research structure of the study.

2.1 Tools

The tools used for this research were the “Questionnaire on use condition and user satisfaction from senior students of elementary schools in Taichung City towards school sports site facilities” edited by the researcher himself. The process of editing and content of questionnaire are described as follows:

● Questionnaire Editing

The “Questionnaire on use condition and user satisfaction from senior students of elementary schools in Taichung City towards school sports site facilities” used as a tool for this research selected topics from past questionnaires that implemented investigations on sports site facilities. Reference was also made to domestic regulations and literature of relevant research on school sports site facilities, where the draft of questionnaire was compiled according to the current state of sports site facilities and features of elementary schools in Taichung City.

● Content of Questionnaire

The questionnaire for this research mainly consisted of two parts with basic information in Part 1 and questions in Part 2. The relevant contents are described as follows:

(i) Basic information

These included name of the school, size of the school, gender and grade.

(ii) Questions in questionnaire

- Investigation on use condition of school sports site facilities (16 questions in total)
- Investigation on user satisfaction for school sports site facilities (23 questions in total)
- Investigation on requirements for improvement of school sports site facilities (4 questions in total)

2.2 Participants

● Specimen Population

In this research, senior students of public elementary schools in Taichung City acted as the specimen population. According to statistics taken by the Education Bureau of Taichung City, there are a total of 229 public elementary schools in Taichung City excluding one school in the process of preparation for enrollment and not yet operational. Among these schools, there are 2,190 classes (Grade 5 and 6) and 54,620 students (both male and female) in total [4].

● Specimen Selection

This research adopted the stratified cluster sampling method, which divided the elementary schools in Taichung City into four groups based on the number of general classes: below 20 classes, between 21~40 classes, between 41~60 classes and above 60 classes. The schools with classes below 20 were categorized as small schools and a total of 104 classes were counted.

The schools with classes between 41~60 were categorized as large schools and a total of 37 classes were counted. The schools with classes above 60 were categorized as jumbo schools and a total of 15 classes were counted. Table 1 shows the size grouping of the public elementary schools over each administrative district in Taichung City. 3 schools were randomly selected from the small, medium, large and jumbo schools respectively to a total of 12 schools, where 2 classes from senior grades of each school were randomly selected to a total of 24 classes and 560 students for completion of the questionnaires. This research issued 560 questionnaires in total, and 18 were not collected, which means a collection of 542 questionnaires with 539 effective questionnaires counted. 542 students were actually counted as participants to the investigation with the effective rate of collection at 96%

Table 1. Statistics on size grouping of public elementary schools over each administrative district in Taichung City [4]

Group District	below 20 classes	21-40 classes	41-60 classes	above 60 classes
East	2	3	1	0
South	0	1	3	0
West	1	2	1	0
North	0	6	0	1
Central	0	1	0	0
Beitun	2	10	3	1
Xitun	4	5	3	1
Nantun	1	4	2	3
Fengyuan	3	3	2	2
Houli	4	1	2	0
Shengang	0	4	1	0
Daya	2	4	1	1
Tanzi	1	2	2	1
Waipu	4	2	0	0
Qingshui	7	3	0	1
Wuqi	3	2	1	0
Dajia	6	2	2	0
Shalu	4	0	2	1
Daan	4	0	0	0
Longjing	3	3	1	0
Dadu	4	3	0	0
Wuri	5	2	1	0
Dongshi	9	1	0	0
Shigang	2	0	0	0
Xinshe	7	1	0	0
Heping	8	0	0	1
Dali	3	2	6	1
Wufeng	9	0	1	0
Taiping	6	6	2	1
Total	104	73	37	15

2.3 Data Processing and Analysis

In this research, invalid questionnaires with incomplete answers above 50% or careless answers (all answers were ticked) were eliminated first. Coding and registration were then implemented, where various data processing and analysis were carried out with the statistic software “IBM SPSS Statistics 22”. Each question was analyzed with discriminant analysis and item analysis, and internal consistency was acquired with Cronbach α . No statistics and analysis were made to partial data that was lost but defined with SPSS missing value. For background variables and school sports site facilities, the use condition, user satisfaction and requirements for improvement underwent descriptive statistics and analysis. Chi-Square Test was used to see if there were distinctive differences in background variable on senior students of elementary schools upon differential analysis on use condition of school sports site facilities. T-Test and One-way ANOVA were used to see if there were distinctive differences in background variable on senior students of elementary schools upon differential analysis on use condition of school sports site facilities. Finally, Pearson product-moment correlation coefficients [5] were used in statistics and analysis on relevance between use condition and user satisfaction.

3. Results from Research

Based on the results from data analysis and discovery of the research, conclusions acquired from the research can be compiled as follows:

- Use condition of senior students of elementary schools on school sports site facilities
 - (i) Use condition
 - (a) 61.1% of senior students of elementary schools knew about the rules and notes related to the school sports site facilities. 85.7% knew that outdoor facilities such as “outdoor ballpark”, “athletic field” and “playground” opened after school hours.
 - (b) 90.5% of senior students of elementary schools had the habit of using the school sports site facilities. Among them, 36.3% used the facilities “after school hours”; 32.6% used the facilities “during sports classes or club activities”. 40.0% of the senior students of elementary schools exercised

with school sports site facilities “less than 30 minutes” every time and 39.8% were between “30 minutes~1 hour”.

- (c) 44.8% of senior students of elementary schools usually used the school sports site facilities together with classmates or club members; 55.7% “played with a group” and 36.6% “played with 2~3 classmates”.
- (d) The top 3 school sports site facilities that senior students of elementary schools wished to have in future were “swimming pool”, “rock climbing field” and “table tennis court” in sequence.
- Differences in different student background on use condition of school sports site facilities
 - (i) In terms of school size: There were distinctive differences in senior students of elementary schools on “recognition on rules of school sports site facilities”, “average duration of every use”, “the sports facilities mostly used by PE teachers” and “willingness on re-use”.
 - (ii) In terms of gender: There were distinctive differences in senior students of elementary schools on “average frequency of use per week”, “average duration of every use”, “number of companions during sports”, “frequency of use during lesson breaks”, “level of fun” and “willingness on re-use”.
 - (iii) In terms of grade: There were distinctive differences in senior students of elementary schools on “average frequency of use per week” and “frequency of use during lesson breaks”.
- Requirements for improvement on school sports site facilities
 - (i) A. For outdoor facilities (athletic field, outdoor ball court, and playground): too far from classrooms, weather influence, crowded with excessive number of people, insufficient space, and insufficient quantity.
 - (ii) B. For indoor facilities (gymnasium or sports field with roof): too far from classrooms and insufficient space, insecurity due to insufficient number of people, insufficient lights and facilities closed.

4. Conclusions

In order to improve user satisfaction from senior students of elementary schools on school sports site facilities, which further encourages willingness and fun in

sports, few suggestions are proposed to the education authorities and school administrative units:

- As learned from school data provided by the Education Bureau, Taichung City, the total rate of establishment on gymnasiums for public elementary school in Taichung City was 48% (110 gymnasiums /229 schools) [6]. Since the rate of establishment on small or medium size of gymnasiums or sports ground with roof is still below the total rate of establishment, priority funds must be issued to increase number of indoor facilities including gymnasiums or sports ground with roof.
- Regardless of sports classes or hours after school, all senior students of elementary schools were fond of ball sports; but the willingness and results were often affected by insufficient number of ball courts and weather. Therefore, a sufficient number of indoor and outdoor ball courts must be provided to meet such needs. As more idle classrooms will be available due to declining birthrate, these facilities can be renovated into simple sports classrooms to reduce the influence of inclement weather on sports.
- Regarding the rate of using school sports site facilities by senior students in elementary schools, boys were higher than girls. Therefore, different needs generated from gender differences must be considered during the planning stage of school sports site facilities, where facilities more suitable for girls are provided, so the willingness of usage can be enhanced.

5. References

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