

1. Comprehensive Research on School Facilities for Unified Elementary and Lower Secondary Schools

Leader: SHIMPO Koichi, Director, Educational Facilities Research Center

(1) Purpose and Aim of Study

In recent years unified elementary and lower secondary educational initiatives have spread throughout Japan, utilizing systems for experimental schools and special zones for structural reform.

Focusing on shared school facilities used in unified elementary and lower secondary education, this study aims to ascertain the realities of facility usage through questionnaires, local interviews, and observation of children's behavior; to examine types of school facilities suited to the particular school operations and educational methods of unified elementary and lower secondary education; and to provide a summary of points to consider when designing such facilities.

A further aim of the study is to have its results reflected in revisions to the MEXT Guidelines for Designing Educational Facilities.

This study was conducted as a project research study for fiscal 2007–2008.

(2) Outline of Research Results

- Target: Since unified elementary and lower secondary education encompasses an extremely diverse range of situations, this study was restricted to shared school facilities thought to present numerous facilities-related issues.
- Method: A study group to conduct the research was established in the Educational Facilities Research Center in June 2007, comprising five members from within the Center and 10 external members. Eight study group meetings and seven working group meetings were held, and a total of 18 site surveys were conducted. The study group published its report in February 2009.
- Details: The group conducted a facilities usage questionnaire targeting 26 unified schools identified as being either in use or under construction of

shared school facilities as of October 2007. Ten of these schools were selected for site surveys and interviews. A further three schools were selected for observation of children's behavior and attitude surveys.

- The report comprises five chapters, and an outline of each chapter is provided below.

Chapter 1: Questionnaire on Facility Usage

- The top reasons behind the establishment of unified elementary and lower secondary schools were superintendents' policies and school closures/mergers associated with the falling birthrate. The most common reason for shared school facilities was emphasis on operational aspects such as division of grades.
- Sixty-five percent of the schools divided grades according to the 4-3-2 system, and 23% according to the 6-3 system. Forty-two percent used an existing site, while 27% secured a new site.
- The rooms or facilities most commonly shared by the elementary and lower secondary parts of the school were staff rooms, infirmaries, home economics rooms, music rooms, libraries, gymnasiums, schoolyards, and pools.
- The areas most commonly used as places where students from different grades could mix were gymnasiums, schoolyards, lunch rooms, libraries, multipurpose spaces, and music rooms.

Chapter 2: Site Surveys of 10 Leading Schools

- The study group selected 10 schools using shared school facilities and gathered basic information from each institution on matters including student numbers, grade division systems, building floor space, block layout, and floor plans. The group also surveyed particular features unique to unified elementary and lower secondary schools from the facilities perspective.
- Chapter 2 outlines the situation at leading schools in terms of both facilities and operations, and provides a detailed examination of the realities of school operation, including demarcation of systems for class-based and subject-based teacher assignment; time units for lessons and time allocation in the daily schedule; events and activities conducted jointly by the elementary and lower secondary parts of the school; number of principals; and sharing of staff rooms.

Chapter 3: Analysis of Site Survey Data

- This chapter presents a comparative analysis by survey item of data from all 10 schools and provides a dynamic picture of trends at unified elementary and lower secondary schools.
- The results shed light on design characteristics specific to unified elementary and lower secondary school facilities, including consistency between grade divisions and zoning of facilities on the site; shared use of staff rooms, infirmaries, etc.; learning spaces suited to small-group guidance and achievement-based teaching; multipurpose spaces that can be used jointly by different grades; libraries that act as learning centers for the entire school; and community-use spaces that strengthen ties with the local community.
- By analyzing the school operations on which facilities plans are based, the chapter also summarizes the operational realities of unified elementary and lower secondary schools, including ways of coordinating the difference between elementary and lower secondary school lesson times (45 and 50 minutes); the actual nature of joint events and activities; numbers of principals and vice-principals; and merging of extracurricular club and PTA activities.

Chapter 4: Observation of Children's Behavior/Attitude Survey

- The observation of children's behavior examined interaction among different grades throughout the day. In addition to lively interaction among different grades in formal settings such as joint multi-grade lessons and activities, the observers noted that interaction occurred naturally on an everyday basis during breaks and when children were coming and going to and from school.
- The attitude survey asked children about which grade division they felt they belonged to, and revealed distinctive results for grade 7 students. Even if the system of grade division grouped them with grade 5 and 6 students, there was a strong tendency for grade 7 students to regard themselves as lower secondary school students together with grade 8 and 9 students. The survey also revealed the interesting result that zoning of facilities on the site affected students' sense of belonging to a particular group.

Chapter 5: Points to Consider When Designing Shared School Facilities

- Based on the results detailed in Chapters 1–4, this chapter summarizes points to be considered when designing shared school facilities for unified schools in the future. The six key points are set out below.
- A design process that fosters links between the elementary and lower secondary parts of the school is necessary when establishing unified elementary and lower secondary schools, and it is crucial to create systems for wide-ranging participation by school stakeholders and local residents.
- Particular care must be taken when setting the number of classes, including forecasting student number trends in conjunction with the introduction of unified elementary and lower secondary school education.
- When selecting a site, it is important to envisage the methods that will be used to conduct school and extracurricular club activities where elementary and lower secondary school students mix, and to check that sufficient space is available.
- Consistency between grade divisions and the zoning of facilities on the site is a fundamental design concept. Spaces need to be organized to suit the educational activities and lesson styles of each grade division.
- Sharing of rooms is highly effective in strengthening links between the elementary and lower secondary parts of the school. Given that children of very different sizes will use such spaces at the same time, it is essential to consider safety aspects.
- As well as taking an active approach to providing spaces where children of different grades can mix and spaces for community use, planners should consider design initiatives that create forums for interaction to occur naturally.