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## Shirabe-Gakushu: A Japanese Trial of Resource-Based Teaching in Large Classes

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*Shirabe-Gakushu, a Japanese version of information skills instruction through resource based teaching, is introduced as an effective and economical teaching method to establish habits of free voluntary reading, independent study, and critical thinking among school children in large classes. The theory, planning methods, procedures, and actual practices are explained in detail. Also described in the article is a successful case of Shirabe-Gakushu implemented as an experimental project at Sheishin Primary School in Sagaihara City, Japan.*

### Introduction

Japanese schoolteachers are now taking on the difficult tasks related to implementing individualized teaching in a mass education or large class size system. This challenge is being met by teachers with the introduction of *Shirabe-Gakushu*, a Japanese version of information skills teaching. The concept of *Shirabe-Gakushu* is essentially similar to that of Eisenberg and Berkowitz's (1990) "Big Six," the Australian "Six R" (*Learning for the Future*, 1993), or any other method for teaching the information process. However, its application and practices are unique owing to special Japanese teaching conditions.

*Shirabe-Gakushu* can be applied to any teaching subject. It is a teaching method that nurtures students' information skills. A special feature of the Japanese approach is to adopt *Shirabe-Gakushu* for only one or two particular teaching units for each subject area at every school grade. The rest of the teaching units are taught by traditional instructional methods. For this purpose, a careful collaborative review of the whole school curriculum and school library collection is made by all teachers in a school. Each school in Japan devises different ways of using *Shirabe-Gakushu*. School librarians take strong leadership in some schools, whereas in others school principals provide leadership to inspire all teachers' creativity and to promote effective library use.

This article explains the planning steps and actual practice of *Shirabe-Gakushu* and then reviews a successful two-year experimental project of *Shirabe-Gakushu* at a large public elementary school in Sagamihara city in Japan, where the school principal took strong leadership. I collaborated in this project as a consultant from the beginning. The article illustrates how, through the use of *Shirabe-Gakushu*, the habits of free voluntary reading,

independent study, and critical thinking can be established among school children in the mass teaching conditions that prevail in many developing countries.

## Shirabe-Gakushu

### *Definition, Origin, and Development*

Shirabe-Gakushu is a technical term recently coined in the field of school education in Japan. Although this term is commonly used by teachers and appears in professional journals of school education in Japan, most standard dictionaries and encyclopedias do not yet carry this term. In 1978, an elementary schoolteacher named Isamu Hosaka introduced a new learning activity into the teaching plans of his library skills class. Students were to search and consult library books in order to answer proposed questions. He named this activity *Shiraberu Gakushu* or "learning by searching" in the research paper he wrote about this activity (Hosaka, 1978). Later, he shortened the term to Shirabe-Gakushu. Hosaka's proposed activity had the same concept as *Kadai Kaiketsu Gakushu*, or "problem-solving study," which had been advocated in Japan by progressive educators since the 1970s. Problem-solving study implies a study method that encourages students to define their own learning problems and to solve them by their own active thinking.

The present *Gakushu Shido Yoryo*, the National Course of Study in Japan, came into force in 1989 and stressed fostering children's *Ikiru Chikara*, or "survival competence." In such an educational trend, the concept of problem-solving study was developed to embrace the full process of learning, or the information process, and it was enhanced to become an established teaching method that is now called Shirabe-Gakushu. It is defined as follows:

Shirabe-Gakushu literally means "search study" in Japanese. It is considered as a type or a style of learning activity which nurtures children's independent attitude. In taking account of children's developmental tasks and positive learning motivation, Shirabe-Gakushu is planned to combine or amalgamate "research" and "presentation" activities. Its final purpose is to give children the competencies to cope with a rapidly changing society appropriately. (Kagawa Daigaku, 1991, p. 129)

### *Planning Steps*

A prerequisite for adopting Shirabe-Gakushu in Japanese schools is never to neglect thorough teaching of basic and essential facts and knowledge. In other words, Shirabe-Gakushu is relied on for a developed or extended study that enables students to comprehend more firmly and deeply what they have learned from textbook-based teaching.

The first step of planning is to define one theme or topic for Shirabe-Gakushu for each grade for each school year. There are three ideas for designating the themes or topics: (a) to set enrichment topics in relation to a particular textbook unit, for example, "animal babies," in connection with

the lessons on an explanatory text in grade 1 language arts; (b) to adopt Shirabe-Gakushu while studying a textbook unit, for instance, "Japanese folk crafts," in grade 5 social studies, or "our human body" in grade 3 science; and (c) to create a special unit in addition to textbook units for Shirabe-Gakushu, for example, "15 years of war" in grade 6 social studies.

In designating themes for Shirabe-Gakushu, careful attention needs to be paid to the following tasks: (a) selecting the theme that can be expected to result in effective learning results; (b) taking up the theme or the field for which the school library is rich in children's books appropriate to the developmental levels of students; and (c) finding the theme that can give each child a feeling of accomplishment.

The second step is to design teaching plans and prepare instructional materials such as worksheets, illustration panels, charts, models, realia, and so on. It is customary for the same grade teachers in a Japanese school to work as a team to produce teaching plans and instructional materials for every lesson period for all school subject areas. The approval and advice of the school principal is necessary before any teaching plans are put into practice.

In each teaching plan, teachers must decide and make clear how instruction is to take place. The ideal would be to adopt an individualized teaching approach for Shirabe-Gakushu. However, this is impossible in Japanese public schools where one teacher takes care of 40 children. Therefore, it is usual to apply individualized teaching only for enrichment topics. For other topics, the methods of simultaneous instruction or group study and learning are applied.

### *Structure and Practices of Shirabe-Gakushu*

Shirabe-Gakushu consists of five steps of student activities in accordance with the information process: (a) to define, (b) to search and select, (c) to think and criticize, (d) to organize and express, and (e) to present. Some teachers add two more steps, for example, "to make study plans" before the second step, and "to evaluate and apply" after the fifth step. In parentheses after each heading listed below, the typical types or styles of instruction and learning for each step are indicated. Also explained in the following sections are the teaching practices and the students' learning activities for each step.

#### *To define (Simultaneous instruction)*

The teacher proposes the main theme of Shirabe-Gakushu to the class and explains the purpose, duration, and methods of study. Next, the teacher asks the children to define as many subtopics as possible using a mapping technique. Then the teacher lets each child define and write down individual search topics on the sheet designed for this step. After reviewing the children's completed sheets, the teacher gathers together those who suggested similar topics and forms them into study groups.

*To make study plans (Group study)*

All children in a group collaborate to plan the following: assignment of each member's searching scope; methods of searching and organization; and searching schedule and ways of presentation, such as overhead projector, computer program, poster, newspaper, drama, puppets, discussion, or debate.

*To search and select (Simultaneous and individual instruction)*

The teacher reminds the children of the various kinds of source materials such as books, newspapers, magazines, videos, information files, and electronic materials and instructs them in any necessary library skills such as classification schemes, shelving rules, or database searching. After simultaneous instruction to the whole class, the teacher asks all the children to make their own lists of study materials.

In this step, the teacher adopts simultaneous instruction in the early stage and later supplements the instruction with individual consultation. For children in the lower grades, the teacher provides specially designed forms to help them to list study materials and other items of the study process more easily (Figure 1). For upper graders, survey by questionnaire, interviews, and Internet searching are also suggested as information sources.

*To think and criticize (Individual study)*

This step is the research and study period. All the children in the class look for appropriate information by themselves in the listed materials for their individually proposed topics or questions. Usually, this class is held in the school library, but sometimes it is held in classrooms or study halls where needed materials from the library and other resources have been assembled ahead of time by the teachers and children. Two or three classes of students are frequently combined for this period, so that more than one teacher is available to provide personal assistance to the children, and to make the most use of limited library materials. Some public library systems lend out their materials as learning resources, on request, to the classes in neighborhood schools.

*To organize and express (Individual study and group work)*

This step is divided into two stages. In the first stage, the children record the information they have found on individual study cards, and they formulate charts, graphs, pictures, and tables based on the information. In the second stage, groups organize and synthesize the information recorded by the individual children in the first stage in preparation for the presentation. The second stage is the most effective part of the structure of Shirabe-Gakushu, because here group dynamics play an important role. Advanced children work together with slower learners. This stage is pleasurable for children because each is able to act creatively and voluntarily according to his or her own ability and individuality.

*To present (Group or individual presentation)*

This step is the most joyful period for children. Each student must decide whether to present what was learned and studied as an individual or to participate in a group presentation. For upper-grade students, group or panel discussions, debates, and speeches are usually used as ways of presentation, with posters, pictures, videos, overhead projections, or OHC, and other hypermedia. The favorite method of presentation for younger students is known as *Omise* or "Open Shops."

In an Open Shop presentation, half of a class of children open several demonstration booths or shops that the other half visit freely to observe different presentations in one booth after another. Any individual or group of children may open shop in a classroom for about 20 minutes. For example, one child tells a story using hand puppets in one corner, while several other children present a self-made drama in another corner of the classroom. Presentations at each shop are repeated continuously as long as the audience comes by. After 20 minutes, the children in the audience have their turn to open shops, and the children who have already presented visit different presentation booths.

*To evaluate and apply*

This step is usually blended with the presentation. While observing what the others have learned, each child evaluates the whole process of learning and studying on the theme, paying special attention to points previously raised and discussed with the class by the teachers. Usually, the teacher asks children to write reports and/or fill in evaluation sheets for this final step.

## An Experimental Project of Shirabe-Gakushu

*The Project Background and Setting*

This project took place at Seishin Primary School in Sagami-hara City, the largest public six-year elementary education institution in Kanagawa Prefecture. The project, hereafter called the Seishin Program, originated in the mind of its innovative school principal, who was inspired by my lecture on resource-based teaching given at the All Japan School Library Biannual Conference in 1994. The principal decided to introduce resource-based teaching into his school curriculum in order to achieve the municipal goal for education, that is, "to make every child familiar to community culture and natural resources." The principal, Mr. Kunio Enomoto, was the President of Kanagawa Prefecture School Library Association at that time, and the association headquarters was situated in his school.

The school was established in 1954 as a branch of a municipal primary school and became independent the following year. Its starting student enrollment was only 222, with a faculty of 12 teachers. With the city's rapid growth and development as a suburban residential area of metropolitan Tokyo, the school expanded exponentially in size and enrollment over a

relatively short period. The enrollment is now 1,410 students, with a principal, a vice-principal, and 45 teachers. It offers a six-year elementary education program, with 38 classes from grades 1 to 6 and one special education class. The school premises consist of four three-story buildings with an auditorium, a gymnasium, a dining hall, and a zoo.

### *The School Library and Reading Programs*

Seishin Primary School is equipped with four libraries, with 15,000 volumes and five book corners, which are administered as one system by the Faculty Library Board. Because no librarian or teacher-librarian is appointed at the school, the libraries are managed by the teachers' library committee with the help of one part-time library clerk (21 hours per week) and 20 or so volunteers who are mostly young mothers.

Three school libraries—a young children's library, an older children's library, and a reference library—are open during school hours Monday through Saturday. Any books in the two children's libraries can be borrowed by the children at recess and lunchtime Monday through Friday. Lending records are kept by student library committee members who take turns on duty. Materials in the reference library are not circulated, but children may photocopy needed pages and portions free of charge with oral permission from the library clerk or volunteers on duty. The reference library, now called the learning center, is well equipped with reference books, vertical files, videos, a copying machine, and a computer for database searching. A computer room with 40 machines is located next door to the reference library. The older children's library houses biographies and fiction; the young children's library has picture books and easy reading books. In the latter, story hours are held regularly at lunchtime every Thursday and Friday by teachers and volunteers.

Another library, Metasekko Bunko, or Metasequoia Children's Library, was created in 1994 from donations from the parents' organization as a self-service lending library for both children and parents. This library is located next door to the principal's office in the central building near the main gate. In addition, five book corners are located in the corridors of each building. These book corners, with several shelves of children's books, are intended to encourage children's free voluntary reading. Therefore, the book corners adopt the honor system for circulation, for example, children are not required to leave any record of book borrowing.

Every Wednesday and Saturday morning, 20-minute reading periods are scheduled for the whole school. Wednesday mornings are for the read-in time, when all members of the school have free individual silent reading, and Saturday mornings are for reading aloud in each class. Library skills instruction and training in the use of computers are incorporated into every school subject beginning in grade 1. Reading interest and reading habits are firmly

instilled in the children of Seishin Primary School, the students of which have won many prizes in national and regional reading contests.

### *Project Implementation*

#### *Infrastructure of the Seishin Program*

The main project engine was the School Project Committee, to which most expert teachers belong. Under the Project Committee, the Research Department and the Special Interests Department were organized, each with different implementing objectives.

The aim of the Research Department was to carry out research on resource-based or library-based teaching and to search for better use of community information. This is done by inviting experts, organizing workshops for teachers, planning observation periods of experimental class teaching, and giving advice on designing class teaching plans.

The Special Interests Department can be termed the "back-up" department that supported the smooth implementation of the project by creating the best possible conditions and circumstances. They kept the school library rooms in good condition, conducted surveys on children's reading abilities and interests, evaluated children's study performances, and organized various activities to motivate the children to read.

#### *First Phase of Seishin Program*

The first phase, which took place in the first year, was the period of preparation and trial. The action programs of the first phase were to define the principles of the program, to train and educate all teachers for the program, and to try some demonstrations of class teachings.

To establish program principles, the concept of Shirabe-Gakushu, or resource-based teaching, had been studied by the members of the Research Department. The results of their study are written in a report that contains the hypotheses of children's accomplishments as skilled learners, the system of project proceeding, action plans for each grade, and manuals for selecting appropriate Shirabe-Gakushu units and constructing class teaching plans for different school subjects. According to the procedures recommended in the report, the action objectives for each grade were defined as the frameworks to furnish monthly allocation of Shirabe-Gakushu units. Then individual class teaching plans, children's learning activities, and instructional materials were devised and prepared collaboratively by the grade teachers.

In order to train the teachers for the program, the principal requested the local board of education to send teachers' consultants to the school to contribute their expertise on the project. The two teachers who would be the project coordinators were sent to teacher-librarian certification courses held during the summer vacation. I was invited to lecture on resource-based

teaching at faculty meetings and provided international materials and information relevant to the program as the project consultant. Study meetings or workshops were held for all teachers every two weeks throughout the first project year. The vice-principal facilitated the meetings.

A demonstration day of Shirabe-Gakushu was scheduled in the middle of the first year. Six classes, one from each grade level, gave demonstrations for the invited audience, who were the city superintendent of schools, other school principals, expert teachers in different school subject areas, and the project consultant. The members of the audience were asked to observe the class demonstrations and to advise on teaching methods and learning resources.

### *Second Phase of the Seishin Program*

The second phase was for refinement and accomplishment. The action objectives of the second year were: to revise teaching plans in order to make teaching and learning more enjoyable for the children, based on the advice given by the invited audience to class demonstrations in the first year; and to publish the project report with reference materials and data as a guidebook on Shirabe-Gakushu for all primary teachers in Sagamihara city.

The following suggestions for improving instruction in the second phase of the program were made by the experts after observing class demonstrations.

1. To enrich school library collections and to reorganize the libraries from mere reading rooms to a centralized learning center and two-level libraries.
2. To instruct children how to search for needed information more effectively.
3. To review teaching plans to implement more advanced levels of Shirabe-Gakushu by analyzing information competences and organizing learning activities in accordance with the information process.
4. To devise appropriate strategies to cope with children's different abilities.
5. To emphasize children's various presentation activities.

Responding to the above mentioned suggestions, the school bought a number of books, library collections were fully re-catalogued for easy searching, and a new library guidebook was edited and distributed to every child in the school. More library skills instruction was incorporated into subject teaching. Presentation activities by all the children in the school was the main goal of the second phase.

At year's end, the report of approximately 200 pages with many charts, illustrations, and tables was published and disseminated to all primary schools in the city.

### Conclusions: Evaluation and Findings

The Seishin Program was evaluated and found to be a successful case of resource-based teaching applied to a mass education system. As a result of the Seishin Program, class teaching methods were drastically changed, teachers' morale improved, parents became more cooperative in relation to all school activities, and the effective use of school and public libraries by children exponentially increased.

Findings from this project are as follows.

- Shirabe-Gakushu is enjoyable to children if it combines questioning, searching, and presenting activities appropriately.
- It is usual to divide a class of children into several groups for Shirabe-Gakushu. The class teacher must have the final responsibility of grouping because the configuration of a group strongly influences the individual learning of each child.
- The larger the class sizes are, the more detailed the teaching plans should be. For this, collaboration of all teachers in a school under strong leadership is required.
- Even if a school is not an open-plan building or if the library rooms are not large, team-teaching or combined class teaching are possible through careful and systematic planning.
- All teachers must understand how to use the school library effectively. If the appointment of a school librarian is impossible, a faculty library committee must educate teachers. Faculty meetings could occasionally be held as library workshops.
- Not only the improvement of children's test grades, but also the children's happy smiling faces are good results of successful Shirabe-Gakushu.

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