Discussions in Preparation for Revisions of the Course of Study in Japan: Aiming to Develop National Curricula Ensuring Accountability*

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*This is the written text of Professor Takahashi’s keynote address please note that film clips were used in the presentation and this is indicated in the text.

First, on behalf of Japanese researchers, I would like to extend a warm welcome to all of you. It is a great pleasure for us to have so many researchers from all over the world in this AIESEP Sapporo Convention. It is a great honor for us to be able to hold this convention in Sapporo, and I’m convinced that it is a significant milestone in the development of research on sport pedagogy in our country. I think school physical education in Japan has been successfully-practiced compared to foreign countries. We have several academic societies researching sport pedagogy such as "Japanese Society of Sport Education" and "Japan Society for the Pedagogy of Physical Education", each of which has close to 1,000 members, publishes journals, and has been engaged in energetic research activities. However, we have not positively attended international conventions and made presentations because of the language barrier. In that sense, I hope many young researchers in Japan take this convention as an opportunity to be active on the international stage.

I’m highly honored and grateful to be given this opportunity to deliver the keynote lecture here. First of all, I would like to show you the DVD that I made recently, titled “Observing Effective Physical Education Class”, so that the participants from around the world can clearly understand the reality of the school physical education in Japan.

Next, I would like to introduce the course of study (i.e., national curriculum) issued by the Ministry of Education in Japan, which supports school physical education practice in our country, while discussing associated problems and challenges.

Section 1: Reality of School Physical Education Practice in Japan

I have been engaged in research on teaching physical education over the years, and I videotaped enormous numbers of physical education classes in connection with the research. I picked up 24 classes as “effective physical education class” among those videotapes, and edited the data and developed the DVD. I selected these classes from the following criteria:

1. the class evaluated highly by students’ formative evaluation.
2. the class assessed highly in viewpoint from "momentum of learning" and "climate of learning", as a result of analysis of student behaviors by the systematic observation instruments.
3. the class that received high evaluation as a result of analysis of teacher behaviors by the systematic observation instruments.
4. the class considered as logically-constructed and easily-understandable by a third person, as a result of my subjective evaluation.
The purpose of developing the DVD is to train practical ability of novice teachers and pre-service teachers. These teachers cannot correctly assess a class even though they can observe it, because they have no image of a good physical education class. That is to say, "you look but see nothing." I developed the DVD because I thought letting teachers see good physical education classes helps them acquire images of such classes, leading to the development of practical ability of good classes.

[Horizontal bar exercise class: 5th grade]

This is a horizontal bar exercise class, 5th hour of the 8 hour-unit. The followings are the remarks about this class:

(1) As the swing is an important kinesthesia in the horizontal bar exercise, "the swing hanging with both knees " was learned as a common task for all students in the first half of the class. Then, the latter half of the class was focused on several skills of a knee circling family. The students learned them task-selectively, according to their abilities and interests. The class harmonized the systematic learning and the task-selective learning.

(2) The teacher's skillful interaction should also be noted. The instruction method using an rubber band as an instructional device functioned effectively. The teacher's feedback behavior while assisting students achieved successful outcome. At the conclusion of the class, the teacher increased students' motivation for learning by letting the students who achieved a skill demonstrate their performance.

(3) Significant result can also be clearly observed in instruction with regard to human relationships. The students were supporting and assessing each other's learning and achievement in a sympathetic manner. We can see the class was surrounded by a positive and good climate.

(4) As a result of such learning method, all students achieved significant outcomes in their skills.

[Sprint exercise class (8-second sprint): 6th grade]

This is a short distance sprint exercise class for 6th grade. The followings are the remarks about this class:

(1) As introductory exercises, the class was engaged mainly in play and game as a preparation for running.

(2) In the first half of the class, the students were learning through teaching materials designed to meet the requirements to run faster, especially widening of stride and rhythmical running. The instructional device for ladder sprint using a cardboard box was made by teacher himself. It is readily portable if folded flat. The mini-hurdle was also made of a plastic bottle held tight by rubber bands. Each material was effective to widen one's stride and make rhythm.

(3) The latter half of the class was devoted to a kind of a "task game" designed to run faster, called as "8-second sprint". In this game, after measuring how many meters students can run for 8 seconds, start lines are set at those distances they could reach and they compete running from those start lines. For example, a student who could run 60 meters starts to run from 60-meter distance from the goal. A student who could run 45 meters starts to run from 45-meter distance from the goal. Each student starts from different distance but goals at the same place. It is a kind of handicap game.

(4) The good points about this game are that it generates fun like playing tag, as well as raising motivation for competition because invisible time becomes a visible goal line.
(5) For generating “the momentum of learning”, background music was effectively utilized.

(6) This class also achieved significant outcomes. All students improved their records and the class average record shortened by a second. The record improvement was obviously a result of the widening of stride and rhythmical running.

[The class based on the sport education model]

This class was implemented for 6th grade, in accordance with the sport education model advocated by Dr. Siedentop. The final sport event at the end of the unit was recorded. A modified-version of "Faustball" was used as a teaching material. The highlights of the class are as follows:

(1) The class was implemented placing emphasis on ethical education in sports and characteristics of sport pedagogy including “seasons,” “team affiliation,” “keeping of records,” “formal events”, “culminating events” and “festivity.” As additional time other than physical education class was required to hold learning activities, the integrated study periods were used. In the integrated study periods, various approaches were taken including planning and managing of events, flag-making, poster-making and making of invitation cards to PTA, etc.

(2) In consideration for switching of defense and offense by setter as important characteristics of net ball games, one-bounce was allowed to make skills of receive and pass easier, and one catch was also permitted for a setter before tossing up to make attacks easier. You can see that rallies were sustained and children were enthusiastic about playing the game, as a result of making the game easier.

(3) The students’ crying scenes tell us they were highly concerned about wins and losses as if they were participating in a local exciting sports event.

(4) Many PTA members observed the event, creating an atmosphere of a festival.

(5) Ethical education in sports was emphasized, contributing to the development of good sportsmanship.

(6) It is reported that each team had spent a lot of time in out-of-class practice, motivated by the climax event.

[Synchronized swimming class: 5th grade]

This is a swimming class for 5th grade. The highlights of this class are as follows:

(1) As the contents of learning in normal swimming class are focused on enabling students to swim, those who can already swim often feel bored. Therefore, the synchronized swimming class was designed, based on the idea that swimming is also sports activity to be enjoyed according to respective abilities,

(2) Each group created performance according to its members’abilities. All students were practicing earnestly, trying to swim in time to music and in the same rhythm.

(3) Students were practicing swimming in time to the 3-minute music, which required them much more amount of exercise than that is required in an ordinary swimming class.

(4) You can find the students’ advanced swimming skill by seeing all of them taking a leisurely swim. It is reported that students with especially low swimming ability improved their skills, and all students became capable of swimming 25 meters at the end of the unit.

(5) It shows students with different abilities were swimming cooperatively, trying to follow the rhythm. It is
reported that performing of personal exercise in a group resulted in significant outcomes in relationships.

[Mat exercise class: 8th grade]

Finally, it is a gymnastics class for 8th grade. The highlights of this class are as follows:

(1) The teacher developed the audio-visual learning program for mat exercise, designed to be used by students in class. The students were learning by making positive use of the program.

(2) The way of the learning in this class were centering on the integration of cognitive learning and psychomotor learning, especially placing emphasis on “how to smoothly combine skills.” The teacher was taking advantage of the audio-visual contents in this instruction.

(3) Main tasks in this class were to design performances of mat exercise by using their acquired skills, and make a presentation of their performances to the class. In the first half of the class, the students were engaged in the learning to improve skill proficiency, and in the latter half of the class, they were working on the challenge learning by choosing skills which they thought they could master.

(4) As a result of thoroughly implementing the knowledge-based learning, students were exercising carefully, and achieved and learned various skills.

(5) It is impressive that the class maintained well-disciplined learning.

You have seen five effective physical education classes in Japan. I think you could have a little understanding of the school physical education practice in our country.

At section 2

I would like to introduce the courses of study (national curricula) leading the practice of school physical education published by Education Ministry of Japan, and also to report about discussions in preparation for the revisions of the course of study to be published soon.

. Characteristics of the School Physical Education System in Japan

First, I will explain the features of the Japanese school physical education system, whose fundamental policies, contents, and instructions in school are greatly affected by the decisions of the Japanese government.

The physical education in Japan has been consistently positioned as an important school subject from the standpoint of health and fitness, since the modern school education system was established (1886).

Sports facilities in all elementary, junior high and senior high schools are constructed under the standards determined by the government. Although class hours of physical education were recently reduced, 90 hours were prescribed for all elementary and junior high schools, and 7 or 8 units in a year (almost 3 hours in a week) for senior high schools.

The full-time physical education teachers are allocated in proportion with the number of students at junior and senior high schools.

Right after World War, centralized curricula were denied and the educational authority was decentralized under G.H.Q’s supervision. Thus, the course of study became a reference book without a legal basis. Schools and regional administrative bodies were encouraged to form their own curricula. However, the government resumed
to mandate the course of study since 1958 after the independence of Japan.

The Ministry of Education mandates the course of study, which contains both the objectives and contents of physical education. The national curriculum gives minimum requirements, leaving creative practice to schools from an institutional standpoint. However, the Ministry of Education issues "guidelines for teaching" and "materials for teaching" which outline specific details about the contents, teaching materials, and teaching methods. The Ministry also sponsors workshops for teachers' consultants from local school boards to help them to give instructions to teachers of each school. Thus, the course of study has a strong impact on the practice of school physical education.

In this way, physical education in Japanese schools has been developed under a centralized educational system. Thus, setting aside the discussion on the rights and wrongs of the centralized physical education, the theories of curriculum and instruction of the Japanese school physical education can be best understood by examining the course of study and guideline for teaching issued by the Education Ministry.

Background of the current course of study of physical education (1978, 1988, 1999)

In mid-1970s, a major change toward lifelong sport was observed throughout the advanced nations. Advanced industrial societies created various benefits, but also generated serious social problems. The conversions of "industrial to post industrial societies" and "material wealth to quality of life" became social indices. Individual persons started to realize the importance of leisure and lifelong learning. The 'sport for all' movement expanded in Japan during this era, leading to the remarkable development of community sport activity programs. The people's ideas and values of sports in their lives changed drastically. Ideas such as "sports as life culture" began to be hold.

Against these background, physical education curricula toward lifelong sport was advanced. And the problem-solving learning method and independent learning style were recommended in order to develop the sportive person who can carry out the lifelong sport.

Characteristics of the current course of study.

The following is detailed explanation for the main ideas and contents of the courses of study in this era.

1. Change of physical education concept

"Education in Sport", which emphasizes the intrinsic value of physical activities, has been accepted as a fundamental concept of physical education. However, the concept of "education through physical activities" has not been abandoned.

2. Change in objectives

The course of study emphasized "pleasurable experience in physical activities", based on the idea that this objective may develop a lifelong appreciation of and involvement in sport activities. Objectives of physical education are established on the same basis, although expressions may vary by scholastic stage. Objectives for senior high school physical education are shown in Fig.1.

The main goal was to develop "the attitude towards lifelong sport", that is, "approach tendency" to physical activities. The development of sport skills and physical fitness, as well as sporting concepts such as fairness,
cooperation and responsibility were considered important to accomplish this overall goal.

**(Fig.1  Structure of Objectives in High School P.E.)

3. Classification of physical activities by type of pleasure

Properties of physical activities were now understood and classified on the basis of the theory of play (i.e., motivation for participating in sports in terms of sources of pleasure). It is a psychological classification. All types of physical activities are divided into either exercise (that is activities to satisfy needs) or sports and dance (that are activities to satisfy desire). The latter is further classified into "competition oriented", "conquest oriented", "record achievement oriented", "form achievement oriented" and "expression oriented" types. The materials for teaching, which were published in connection with the course of study, advocated the teaching methods to provide sufficient experience in such physical activities. That was the method which individual student decides his own object (that is learning purpose in the process).

**(Fig.2: Classification of Physical Activities)

4. Change of curricula composition

The curricula of each school grades were developed as follows.

[Elementary schools]

Physical education in elementary schools is composed mostly of physical activities and some health education instructions. Activities practiced in each grade are shown in Table 1. The new course of study divides elementary school education into three grades, lower (1,2), middle (3,4) and upper (5,6), instead of six, aiming for flexible practice of physical activities through selection and integration.

**(Fig.3: P.E. Curriculum of Elementary School)

"Fundamental physical activities" and "games" constitute the contents of physical education in the lower and middle grades. It is difficult for students at that developmental stage to sufficiently experience activity properties of exercise, sports or dance. "Fundamental physical activities" are noncompetitive individual plays and "games" are competitive team plays. "Exercise", "apparatus gymnastics", "track and field", "swimming", "ball games" and "dance" constitute physical activities for the higher grades. Percentages in Table 1 represent hour ratios to be instructed.

[Junior high and senior high schools]

Tab.1 and 2 show physical activities for junior high and senior high schools, respectively. The five groups in the former course of study (exercise, individual sports, team sports, martial arts and dance) were increased to seven to reflect the composition of physical activities in elementary schools and to provide instruction with more emphasis on characteristics of the activities. The "martial arts", which include Judo, Kendo and Sumo, were renamed "Budo" to utilize their Japanese cultural properties in teaching.

**(Tab. 1 and 2: Scope of Activities of Selection in Junior and Senior High School)
5. Introducing selective programs

Intending to promote deeper connection with lifelong sport and to offer individualized education, the course of study offers ‘selective programs’ in which students can select types of activities according to their own interests, abilities and capacities.

Selective programs are introduced in the second year of junior high school, with the range further expanded for senior high school students (table 1 and 2). In programs for junior high school students, only intra-activity selection and selection of an activity from a group are possible; however, senior high school students are encouraged to select activity groups.

6. Positioning theoretical contents

The theoretical contents of both physical and health education for junior and senior high school students have been consistently positioned since the end of World War, in terms of aiming at scientific practice of physical education. Knowledge of physical education for senior high school is composed of (a) training methods and contents of physical fitness, (b) structure of skills and methods of practice and (c) design for lifelong sport. Knowledge learning directly related to physical activity was emphasized.

Discussions in preparation for revisions of the course of study

Let's move on to the next topic regarding what were discussed in "the Central Education Council" and "Committee for Developing the Course of Study" for revision of the course of study.

1. Accountability of school physical education

A decline in academic ability of Japanese students has become a social problem, since right after the issuance of the current course of study. Their academic ability has ranked relatively high by international comparison, but has fallen far down in the rankings recently. Regarding this problem, “the more relaxed education policy,” “careful selection of the contents of learning” and “cultivating the problem-solving ability,” which had been the important issues in the development of the current course of study, were severely criticized.

"The curriculum guidance records (which show criteria for learning assessment)” were revised in connection with the issuance of the current course of study. In this revision, "absolute assessment" was introduced instead of comparative assessment which had been adopted until then, enabling goals of each grade and learning attainment levels to be assessed based on criteria. However, objectives and contents of the current course of study were too obscure to implement absolute assessment, becoming a point of argument. Moreover, in an age when accountability is the focus of public scrutiny, it was required to explain to the taxpaying public about what contents of learning are to be acquired by students.

On the other hand, changes in children's growing environment have caused polarization between physically active and inactive children, and it's impossible to halt the declining trend in their physical fitness. Regarding this problem, the extent to which physical education could minimally guarantee the improvement of physical fitness was called into question. There is an unchanging social trend in which once academic ability is viewed with suspicion in intellectual subjects, physical fitness is immediately called into question in physical education.
2. Identification of the minimum goals and contents of learning

In response to such matters, the special committee on health and physical education of the Central Education Council started to examine a structure of abilities, that is, the objectives to be guaranteed by physical education. As a result, the structure of objectives in physical education was identified as shown in the figure.

**Fig. 4: Objectives Structure of Physical Education**

The objectives of physical education, consist of (a) physical ability, that is, physical fitness as fundamental for life" and "motor skill as fundamental for life-long sport", (b) attitude, that is"normative attitude in sport" and "normative attitude in learning", (c) knowledge and (d) thinking and judgment. The Ultimate goal is to achieve continuous practice of life-long sport by combining those objectives. Traditionally, knowledge had not been presented as independent factor, but incorporated in factors of skill, attitude, thinking and judgment. However, based on the idea that knowledge is important foundation for skill, attitude, thinking and judgment, it was positioned as fundamental for academic abilities of all subjects. In line with this framework, the objectives to be achieved were examined in details responding to each physical activity area and grade level.

3. Outcome based Curriculum of Physical Education

**[The 4-4-4 sequential principle]**

**Fig. 5 4-4-4 Sequential Curriculum Principle**

The 12 year-curriculum from elementary school to high school is based on the 4-4-4 sequential principle from the standpoint of ensuring the outcomes of the contents of learning. Under this curriculum, 1st grade to 4th grade is a period for basic learning when the way of fundamental physical activities and plays are acquired. 5th grade to 8th grade is a period for exploration when major physical activities are commonly learned and appropriate activities for each student are discovered. And 9th grade to 12th grade is a period for enhancing specialization when appropriate activities are chosen and more deeply learned.

A selective activity program, which had been adopted from 8th grade, was determined to be introduced from 9th grade. In the past, there were some cases in which a student chosen a physical activity with no learning experience and started to learn it. But this time, it was considered to be necessary for all students to learn the common contents before choosing their own activities based on their abilities and interests.

**[Emphasis on the contents of learning in a 2-year framework]**

Although the current course of study had been presenting the contents of learning in 2-year units, it was strongly emphasized that the 2-year framework was thoroughly implemented because more time has to be allocated to one unit in order to ensure the acquisition of the contents of learning. There was a trend in physical education classes to repeat learning of the same physical activity every year. As a result, each unit became fragmentary. Students could have elementary experiences, but could not fully appreciate the characteristics of a physical activity, and were unable to steadily acquire the contents of learning. Given this situation, the 2-year framework for the contents of learning was adopted from elementary school grade.
4. Improvement in each physical activity area

[Emphasis on developing physical fitness]

As it was considered that the trend of decline in physical fitness of children had to be stopped, the physical education class hours, which had been reduced to 90 hours, increased to 105 hours, that is, 3 hours in a week. However, there remains a possibility for reduction of class hours if satisfactory outcomes are not achieved. Ever more earnest attempt is required to tackle the problem of decline in physical fitness. Exercises for developing physical fitness, which had been adopted form a higher grade at elementary school, were determined to be introduced from 1st grade. However, it was determined that the exercises will be centered on forming various movements through playful physical activities", out of concern that dull physical training in lower or middle grades of elementary school might generate children avoiding physical activity.

As the class hours of exercises for developing physical fitness are not enough to achieve sufficient outcomes in order to seek improvement in physical strength from higher grades in elementary school to high school grades, the necessity for interconnecting activities in out-of-class hours, at home, and at local community was emphasized. Methodology for such class is an important issue in the future.

[elimination of"fundamental physical activities"]

The framework of “fundamental physical activities”and “game,”comprising physical activity areas in lower and middle grades of elementary school was disbanded. The game area, which is the most collective physical play and leads to ball games, will continue to exist. The reasons for eliminating the fundamental physical activities are as follows: (1) its unsubstantial characteristics were not sufficiently understood by teachers and schools, (2) the exercises for developing physical fitness were newly adopted from lower grades in elementary school, (3) it was considered that students should learn in a systematic and developmental manner, by clarifying the connection between physical play which had been included in fundamental physical activities and each physical activity which had been introduced from higher grades.

[Overcoming of the struggle between various ball games]

Another major change was brought about in the ball game area. It has been continuously questioned which ball games should be selected from 200 to 300 kinds of ball games and evaluated as teaching materials, and how to develop a curriculum system for ball games. What kinds of ball games should be evaluated from the perspective for life-long sport and learned by students has become an international issue. Upon this revision, ball games were divided into " invention type", " net-wall type," and " fielding type", in line with the trend in the U.S. and Europe.

5. Discussion about teaching method producing the learning outcome

It was stipulated at "School Education Low" that academic ability was consisted of (a) basic and fundamental knowledge and skill, (b) ability to think, judge and express required to solve problems by using knowledge and skill, and (c) motivation for learning.

Prior to the revisions of the course of study, the Central Education Council criticized the trend of educational idea and practice, by saying"development of basic and fundamental knowledge and skill (acquirement-based education)"and "development of ability for self-learning and self-thinking (exploratory-based education)"should not
be recognized as conflicting or alternatively, but the teaching strategy of integrating these methods was needed. Then, the Council presented three steps of acquirement-based education, application-based education, and exploration-based education.

Children's independent and spontaneous learning had been recommended based on the idea of "pleasure centered physical education" (physical education based on play theory). However, common learning of the basic and fundamental contents is inevitable in order to make sure the acquirement of the specific contents of learning. Thus, the basic and fundamental contents should be commonly learned, before task-selective learning and problem-solving learning according to each student's ability and interest are positioned. In the methodology adopted in the classes of DVD you have seen before, the step for common learning of the fundamental contents and the step for task-selective learning were equally positioned. Establishing a methodology to promote learning for acquirement, application, and exploration will be the important issue in researching sport pedagogy.

6. Toward the development of the national curriculum based on evidence

In this revision, considerable concern was paid to identifying objectives and contents of learning that should be attained by students, but those objectives and contents were not set based on actual conditions of children. Although the measurements of physical fitness are implemented every year and data has been accumulated for a long time, there is little research that assures by evidence-based method what contents of learning and how much can be achieved through physical education classes. In order to develop a national standard that is acceptable to anyone, it is required to examine how much children have achieved the objectives and contents of learning instructed by the course of study and how much can be achieved through effective physical education classes. I think an authentic national standard can be developed only through a survey for achievement and a class research. Based on such ideas, we initiated the 3-year research with academic fund from our Education Ministry. I would like to report the results of research at the AIESEP convention 2 years later.

Thank you for your attention. I hope you will enjoy your stay, trip and leisure activity in Japan after this convention.