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Хүүхдэд цогц боловсрол олгох японы загвар - Токацу

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Өгүүллийн мэдээлэл

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Нийгэм, сэтгэл хөдлөлийн суралцахуй
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ХУРААНГУЙ

Өнөө үед бусадтай хамтран асуудал шийдвэрлэж чаддаг хүмүүс ажлын байрны шаардлагыг хангаж байгааг ЭЗХАХБ-ын 2015 оны PISA үнэлгээний хамтран асуудал шийдвэрлэх ур чадварыг үнэлсэн үр дүн илтгэж байна. Ихэнх улс оронд хамтран ажиллахыг сургуульд шууд заадаггүй, бусад хичээлүүдээр зааж тухайн ур чадварыг эзэмшүүлдэг. Япон улсын хувьд хамтран ажиллах ур чадварын Токацу загварыг ашиглан зааж сургадаг билээ.

Токацу бол суралцагчид хийнгээ суралцаж болох үйл ажиллагааны систем бөгөөд хүүхдэд боловсрол эзэмшүүлэх цогц загвар юм. Хичээлийн, танин мэдэхүйн бус суралцахуйн туршлагыг сургалтын хөтөлбөрт оруулах, хичээл сургалтыг хичээлийн бус цагаар суралцаж буй мэдлэгийг нэгтгэж интеграцчилахад Токацу загварын ач холбогдол оршино. Нийгэмшил болон сэтгэл хөдлөлийн, танин мэдэхүйн бус суралцахуй нь өнөөгийн бидний хийж буй ажил төрөл болон хүүхдийн сайн сайхан байдалд зайлшгүй шаардлагатай гэж үзэж байгааг ЭЗХАХБ, ЮНЕСКО зэрэг онцолж байна. Токацу загварын хувьд амьдралд чухал хэрэгцээтэй суралцах үйл ажиллагаа нь зөвхөн хичээлийн явцад танин мэдэхүйн хувьд өрнөдөг төдийгүй хичээлийн бус цагаар болон суралцагчдын оршин буй газар, гэр орондоо өнгөрүүлэх цаг хугацаанд өрнөдөг гэдгийг хүлээн зөвшөөрдөг юм. Суралцахуйг зөвхөн сургуулиар хязгаарлалгүй, сургуульд эзэмшиж буй мэдлэг, чадварыг суралцагчдын гэр бүл, орчин тойрноосоо суралцаж буй зүйлстэй нэгтгэх нь хүүхдэд олгож буй боловсролыг бататгаж бэхжүүлдэг байна.

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Educating the Total Child Using the Tokkatsu Model

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EDUCATING THE TOTAL CHILD USING THE TOKKATSU MODEL

1. BACKGROUND: The Rising Appreciation of Holistic Education

Today, increasingly, the need to develop social skills, emotional stability, collaboration, critical thinking, and the like in children has jumped to the forefront of educational reform, alongside traditional subject mastery. Various reasons are cited. It is said that noncognitive skills, not just cognitive (subject) skills, are important for both achievement and labor-market outcomes, and that the "evidence suggests that the labor-market payoffs to noncognitive skills have been increasing over time and the payoffs are particularly strong for individuals who possess both cognitive and non-cognitive skills" (Schanzenbach et al., 2016, p. i). Noncognitive skills, such as social and emotional learning (SEL), are increasingly described as crucial for future success in multiple fields, not just work. This leads to the assertion that "since noncognitive skills matter greatly and can be nurtured in schools, developing them should be an explicit goal of public education" and the overemphasis on cognitive not only impedes noncognitive development but "is also counterproductive" in developing cognitive skills since the two are interrelated (Garcia, 2014, p. 4). Such studies only strengthen the increasing awareness of the importance of developing skills which are not restricted to a narrow definition of subject mastery.

In the end, there is the basic common sense fact that a child who receives a perfect score in a math test, but is emotionally unstable and engages in impulsive acts of aggression, is low in self-esteem and cannot get on with his/her life, is not an "educational success". If the goal is to develop a citizen who is a productive member of a democratic society, and happy with himself/herself and empathizes with others, the task cannot be confined to just certain areas of the child's school life. If the noncognitive side of the school is integrated with the cognitive, if the child repeatedly receives the same positive messages in different socialization sites within the school and from different socialization agents (e.g., at school, the family, community, and media), the message will be stronger.

Here, I refer to "noncognitive" as areas such as interpersonal skills, motivation, emotional maturity, the ability to concentrate, ability to care, self-control, outlook on life, leadership, etc., which transcend a narrow definition of the "academic" subjects, but which are nevertheless crucial for the child to acquire. I refer to nonsubject periods below as those periods which are not subjects, but which are, in the Japanese case, situated like subjects in the curriculum.

With the increasing appreciation of the need to develop the whole / total child, which includes both cognitive and noncognitive aspects, there has been a rising interest in the holistic educational curriculum model of Japan, which is called the tokkatsu model here. Japan includes explicitly noncognitive learning periods in its curriculum, alongside regular subjects. The period of tokkatsu is symbolic of this framework. However, there are also hours, such as the period for integrated studies, etc., which address noncognitive skills, and are not subjects, but are within the official curriculum. Other aspects of the Japanese school day also reflect a holistic orientation, since raising the total/whole child is the pillar of education in Japan. Tokkatsu is taken up here because it is a symbolic noncognitive education period.

In the past, foreign observers have understood noncognitive learning in Japanese schools through its several easy-to-spot manifestations, such as cleaning, serving lunch, and sports day. Scholars have referred to these as simply "Japanese" characteristics. Even in countries which have adopted sports day, the fact that it is part of a larger education curriculum tends to be lost.

As interest in developing the total/whole child mounted, certain societies have started to implement the tokkatsu model, and in the Middle East, Egypt has adopted the model on a nationwide scale. As such developments unfolded, there was a need to be more specific about what the tokkatsu holistic educational model was about and how it is trying to bind together both cognitive and noncognitive learning under a common curriculum.

Tokkatsu (or tokkatsu plus, as it is referred to at times) is not static. Teachers constantly remake it through their lesson study. Lesson study has become quite known abroad as a model which emphasizes the bottom-up improvement of teaching and learning. Teachers discuss a common theme which they think should be the focus (e.g., lack of experiences with nature, building relationships across grades, anti-bullying, how to teach a new subject, etc.) and open up their classes for observation and discussion with other teachers. It is relatively well

known abroad that lesson study is one of the primary means for Japanese teachers to learn from each other (Lewis, Perry & Hurd, 2009; Doig & Groves, 2011). What is less known abroad, however, is that lesson study is not limited to subjects, since the Japanese curriculum encompasses both the cognitive and noncognitive aspects. Lesson study is utilized not just in math, reading, and social studies, but in periods like tokkatsu and noncognitive learning as well. The two are not separated.

Over the years, certain common tokkatsu practices have evolved nationwide as effective, since they reflect what the educators see as addressing the needs of contemporary Japanese children in general, such as the need to interact with people of different ages and generations, amidst the nuclearization of the family and urbanization of society. This leads to common practices in various locations, which emphasize activities involving different grades, events with the elderly in the community, etc. However, the more specific needs of the children will differ by region, school, and classroom. In a school in a depopulated rural district, the number of children will be fewer. Then, tokkatsu activities may try to expand the children's relationships by linking with the community, tightening the relationship between the elementary and junior high school of the district, using school events, etc.

The tokkatsu model is constantly reviewed through collaborative teacher learning. This also means that if a different society adopts the model, the specifics will differ, since the identified needs of the children are different. This focus on adjusting the needs to fit the children means that the teachers have to be skilled in comprehending the messages the children send out, not just through verbal explanation (which would be easy) but also through reactions, mutterings, movements, etc., which may in the beginning seem irrelevant. This is often called mitoru (mi comes from miru and means to observe; toru comes from take and means to comprehend), which means to understand the child.

Lesson study provides the platform for teachers to learn how to better engage in mitori. As teachers practice it with others (who are often much better at it than them), they improve their mitori skills. It also means that teachers have to study to understand the social changes which are reflected in the environment of the children. If a teacher is dogmatic and his/her ability to engage in mitori — to catch the message the child is trying (often unconsciously) to convey — is weak, the teacher will only be enforcing his/her view top-down on the child.

The needs of the children will change over the years, with social change and with the composition of the school or classroom. It is this combination of building a common consensus and customizing it to fit the state of the children in front of you that makes teaching the holistic curriculum a dynamic process. Though the teaching of the noncognitive abilities with the cognitive ones as part of the curriculum has a long history in Japanese education, it is by no means a finished product.

2. HISTORY OF THE INTERNATIONALIZATION OF TOKKATSU

There may be different versions to the history of the internationalization of tokkatsu. Tokkatsu is short for tokubetsu katsudo (which is literally translated as special activities in the Japanese curriculum). Tokkatsu reflects the holistic framework of the Japanese curriculum which strives to develop the total child. In postwar Japan, when designing a democratic curriculum, what fell outside of the subjects, but were still considered as crucial educational experiences/practices for the child, were placed in the curriculum under what has now developed into tokkatsu (Kokuritsu Seisaku Kenkyujyo, 2016a, p. 7). Noncognitive education has thus been part of the official curriculum in Japan throughout the postwar era, though many practices (e.g., sports day) were already in existence in the society before this.

If we look at the English literature on Japanese education, the fact that Japanese education emphasized the "whole child" "whole person" was one which was often noted in the studies in the 1990s. Shimahara and Sakai (1995, p. 206) described the "whole person" orientation in Japanese education as involving "cognitive, moral, expressive, and social aspects of schooling." Perhaps, the scholar who most squarely focused on this aspect of Japanese education was Catherine Lewis, now known for her expertise in lesson study. Her book, Educating Hearts and Minds (Lewis, 1995), embodies the holistic model of Japanese schooling from even its title.

Notably, the 1980s was the era of educational reform in America and the western world. A Nation at Risk, a well-known report on the "deplorable" state of American education, was issued in 1983, which maintained that "If an unfriendly foreign power had attempted to impose on America the mediocre educational performance that exists today, we might well have viewed it as an act of war. As it stands, we have allowed this to hap pen to ourselves"

(National Commission on Excellence in Education, 1983). Such reports often cited Japanese education, seen as the key to Japan's economic success, and there was a notable rise of writings on Japanese education in the English literature (Cummings, 1989).

Since Japan has continued to rank highly on international tests such as the Trends in International Mathematics and Science Study (TIMSS) from The International Association for the Evaluation of Educational Achievement (IEA) and the Programme for International Student Assessment (PISA) by the Organisation for Economic Co-operation and Development (OECD), Japanese education has continued to attract inter national attention. In TIMSS 2015, Japanese were among the top perform ers in fourth and eighth grades for both math and science, alongside other East Asian countries. In PISA 2015, Japanese students ranked second in scientific literacy, fifth in math, and eighth in reading (Kokuritsu Kyoiku Kenkyujyo, 2016b).

What initially resulted from the interest in Japanese education, however, as far as international models were concerned, was largely a focus on lessons and on the cognitive side of Japanese education, especially an interest in lesson study math. There are probably several reasons for this apparent emphasis on the cognitive skills. One is that lesson study was sought in a context in which there was widespread competition for achievement in core subject areas such as math (in the "quantifiable" sense). Indeed, in our global era, inter national league tables rank everything from achievement tests to desirable places to live. Lesson study was seen as a means to enhance student achievement (Rappleye & Komatsu, 2017, p. 401). It was only in 2015 that PISA introduced its Collaborative Problem-Solving test (OECD, 2018), corresponding to an era of the international reevaluation of non cognitive skills. In addition, studies which introduced Japanese lesson study to the world in the 1990s to the early 2000s (Stigler & Hiebert, 1999; Lewis, 2006) were mainly written by America-based scholars to an audience that largely identified schooling with subject mastery. The Japanese model of lesson study has now become internationalized. Lesson study has its own international association, the World Association of Lesson Studies (WALS), and boasts teacher groups/networks in various countries; it is understood as a bottom-up and deliberative method for teachers to improve their lessons. The Japan International Cooperation Agency (JICA) took on promoting the lesson study model abroad from around the 2000s (Jung et al., 2016).

Now, cognitive and noncognitive learning are like two wheels of a single bicycle in the holistic curriculum framework. Therefore, taking one without the other is like taking a bicycle with only one wheel. The bicycle will certainly move, but not as efficiently as when both the wheels are there. This is what has been the case for the Japanese model of schooling.

Actually, several decades ago, when the above-stated studies on the "whole child" model of Japanese education were being published by scholars of Japanese education in English, the development of social and emotional skills was still considered to be something which was not in the realm of the school in many countries, and it is probably safe to say in the westernized international educational reform discourse arena in general. It was primarily seen as the responsibility of the family and the community. It was seen as something that was not as "scientific" or quantifiable.

The international climate started to change when studies showed that noncognitive skills were important in life success and that it was needed in today's world (Goleman, 1996). There were multiple intelligences (Gardner, 1983), not limited to a narrow definition used by previous generations. Social change necessitated a stronger emphasis on developing the social and emotional abilities. Changes in the workplace were seen to require problem-solving collaboration, the problem of violence in many countries was seen to necessitate the development of citizens who will not rely on force.

As a symbolic move, PISA started measuring collaborative problem solving in 2015. It justified the decision based on the changes in society: "Modern societies require people to collaborate with one another. PISA 2015 assessed for the first time how well students work together as a group as well as their attitudes towards collaboration". Japan was second (Singapore being the first) and outperformed all OECD countries. The country note on Japan stated that "students in Japan perform even better in collaborative problem solving than their already strong perfor mance in science, reading and mathematics would suggest" (http://www. oecd.org/pisa/PISA-2015-Collaborative-Problem-Solving-Japan.pdf, June 2018).

The Collaborative for Academic, Social, and Emotional Learning (from now on CASEL), which has worked hard to create a platform for evidence-based SEL, noted in 2015 that the recognition of "the impor tance of en-

hancing students' social, emotional, and academic compe tences is at an all-time high. Educators, researchers, service providers, parents, and leaders in government, business, and philanthropy are increasingly seeing the value of social and emotional learning (SEL)" (CASEL, 2015). There are increasing statewide efforts to implement SEL into the curriculum (Dusenbury & Weissberg, 2017). It is against this background that the "other wheel" in the Japanese model of schooling started to be noticed. Egypt adopted the holistic model of education in Japan (tokkatsu or tokkatsu plus) with JICA's support. News related to this was broadcasted around 2015 in Japan, and articles discussing the implementation of the "Japanese style of education" (Nihonshiki kyoiku) abroad appeared in Japanese newspapers.

Preceding this period, I had put up a Japanese holistic education homepage in 2012 (http://www.p.u-tokyo.ac.jp/~tsunelab/tokkatsu/), since it was clear from observing how lesson study had become internationalized, that as long as a model of practice was discussed only in Japanese, information on it would not be shared internationally. Although teachers around Japan were practicing and struggling with how to integrate non cognitive with cognitive learning and there were teachers who regarded tokkatsu to be their expertise, there was almost nothing in English. I saw providing bits and pieces of information as a quiet pastime on the side, amidst my research, which I was fulfilling because I felt that in this era of globalization of educational models, there should be more non-western models available in the international sphere. I felt that the diversification of models helped discussion among educators/policy makers. For a long time, I tried to find an educator who was comfortable enough with English to take over the above-stated homepage (now in three languages — English, Arabic, and Chinese). Since Japan is probably one of the most English-resistant countries in the world, this proved very difficult.

However, as it turns out, the international discourse on noncognitive education, and holistic education in general, had changed. There was much more interest in holistic models than there was before. In addition, as noted above, the world had entered an era of intense global borrowing of models (though borrowing models itself is nothing new), and Japanese education with its high student achievement, economic development, low crime rate, etc., was seen as one of the alternatives (to western models). Thus, what was to be my quiet pastime on the side suddenly became not so quiet as envoys from abroad started to visit the Center I was heading at that time (Center for Advanced School Education and Evidence-based Research (CASEER), Graduate School of Education, The University of Tokyo), and others came for advice. The former curriculum specialist on tokkatsu played a crucial role in implementing tokkatsu in Egypt. Japanese teacher groups started stepping into the scene. For example, the Japanese Association for the Study of Extra-class Activities held a symposium on the internationalization of tokkatsu, in which both Sugita and I spoke on the panel. The All-Japan Elementary School Event Research Society contributed to the making of the DVD issued by the Center at the University of Tokyo.

In any case, after several decades of discussions of one wheel (cognitive, especially math), the other wheel (non-cognitive, especially tokkatsu) in the Japanese educational model seemed to have been discovered.

3. THE JAPANESE SCHOOL SYSTEM TOKKATSU

Before outlining some details of tokkatsu, it is probably beneficial to provide a short overview of the Japanese educational system. Figure 1 shows the Japanese school system as it is today. At the pre-school level, kindergartens are often private, but day care centers accept children whose families need child care, such as double-income families. Elementary school and junior high (lower secondary) school follow, with high (upper secondary) school after them. Families might send their children to after-school private lessons in calligraphy, swimming, tennis, art, etc. As the child grows older, more children will go to the after-school learning centers (juku). Elementary school and junior high school

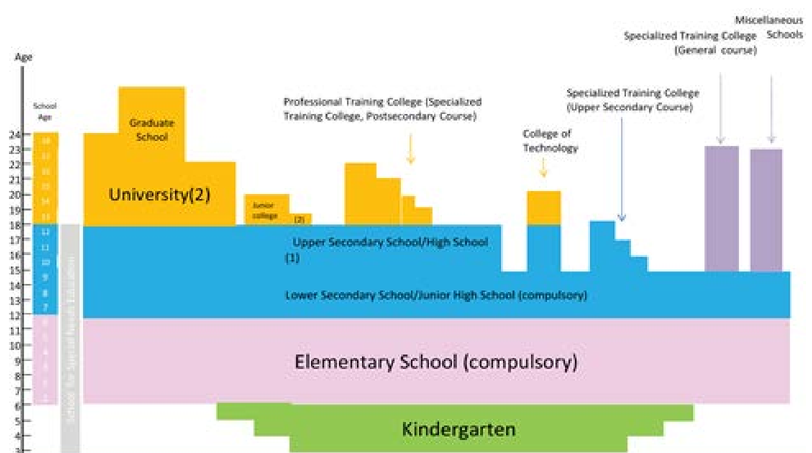

Figure 1. The Japanese educational system.

(lower secondary school) are compulsory, but almost everyone in the lower secondary cohort goes on to high school (higher secondary school), so in effect, going on to high school is the norm. Post-secondary education leads to the 4-year universities or colleges, the 2-year junior colleges, etc.

4. THE TOKKATSU MODEL

Now, the Japanese tokkatsu model is a holistic model of child learning derived from the Japanese period called tokubetsu katsudo (tokkatsu, for short), which is situated in the national curriculum standards (Table 1). Tokkatsu originates from a holistic view of the child which sees skills and attributes such as interpersonal skills, collaborative management, and emotional maturity as at least as valuable as, and as integrated with, traditional intellectual subjects. This integration is important, since the goal of the holistic curriculum is to develop the non-cognitive side of the child as well as the cognitive. An emotionally stable, socially adjusted child is more likely to be able to do well in studies. The two are not separate.

It is meaningful to point out here that simply maintaining that one will pursue holistic education does not assure that the contents will be democratic. Indeed, the pursuit of "virtue" or any other values of educa tion can uphold values which are quite undemocratic. It is the guiding ideology of education, and a vision of the society to be attained, which shapes the contents of the values to be pursued in education. The present postwar model of Japanese education was built on a conscious denial of prewar militaristic ideologies and a pursuit of democratic principles; as with democracy itself, however, it is very much an unfinished, ongoing process.

Table 1. The yearly unit hours of subjects in elementary school (school education law)

Grades	1st	2nd	3rd	4th	5th	6th
Hours for Each Subject						
Reading	306	315	245	245	175	175
Social Studies			70	90	100	105
Math	136	175	175	175	175	175
Science			90	105	105	105
Life Science	102	105				
Music	68	70	60	60	50	50
Art	68	70	60	60	50	50
Home Economics					60	55
Phy. Ed	102	105	105	105	90	90
Moral Education Period	34	35	35	35	35	35
Foreign Language Activities					35	35
Period for Integrated Studies			70	70	70	70
Tokubetsu Katsudo (tokkatsu)	34	35	35	35	35	35
Total	850	910	945	980	980	980

Source: Taken and translated from the Ministry of Education homepage, http://www.mext.go.jp/a_menu/sho.

There are several features of the Japanese tokkatsu model which define it as it operates today. (1) It is situated in the curriculum, together with subjects such as math and reading; it is thus officially "education" in the wider sense. There is no dichotomy between the cognitive and non cognitive skills. Ideally, the two should be integrated as part of developing a balanced person. (2) The activities placed under tokkatsu are extremely diverse, including everything from cleaning to student councils. They, however, are bound by a common ideology that emphasizes collaboration, child initiative, and "learning by doing". The school is seen as a place for learning everyday life (seikatsu), thus, cleaning collaboratively, for exam ple, is an essential part of education. (3) Its present ideology is based on a conscious departure of a prewar past. Let us start with (1). As can be seen in Table 1, tokkatsu is one of the items in the curriculum. Thus, it has its educational goals and hours.

5. THE ORIGINS OF THE "UNIQUENESS" OF THE TOKKATSU MODEL

If we look at the present educational theories and the models available in the international sphere, we can see that most of them originated from the west. We only have to mention a few to confirm this — active learning, conflict resolution, and problem-solving. In the sphere of interpersonal skills, the most famous model has been SEL.

Now, Japanese education developed relatively independent of the west. Unlike most of Asia, Africa, or Latin America, Japan, being a former colonizer itself, was never colonized by a western country. The fact that western models are the most common ones in the international arena of educational reform today means that an Asian model developing largely independently from western colonization is bound to be a "different" kind of model. This is where the relative "uniqueness" of the Japanese model originates from. If the international sphere was dominated by Asian models, the Japanese model would not be that "different".

School education from high school and below in Japan is the strongest part of the Japanese educational system and has given birth to various independent models. Internationally, one of the most famous models has been lesson study, now with its own international meeting, the WALS. Tokkatsu (plus) is an emerging model. Education related to technology, innovation, etc., also has its international models and have already been implemented abroad.

Since the Japanese model, for reasons explained above, tends to be "different" from the dominant American and other western models, depending on the dominant discourse on what is good education at that time, the Japanese model would look either behind/irrelevant or ahead/ relevant. Bottom-up collaborative improvement of lessons among teachers (lesson study) and noncognitive learning in the curriculum (tokkatsu, etc.) are two areas in which the Japanese model has more experience than the western models and in which there is international interest. Addressing multicultural issues, especially ethnic and racial, would be the opposite. Each model has its strong points and areas in which improvement is desired.

6. KEY CONCEPTS OF TOKKATSU

6.1. Learning by doing

Japanese education is experiential and noncognitive education is at the core of this characteristic. The educational value of experience, especially that which involves direct experience rather than quasi-experience via the Internet, has been reemphasized with every revision to the curriculum. Activities such as school events, volunteering, and long-term stayovers have been seen to compensate for the lack of opportunities to "experience" in the environment by today's children (e.g., lack of opportunities to engage with nature or the community, lack of group activities, lack of opportunities to explore, decrease in the ability of the family and community to be effective socializers because of the nuclearization of the family, etc.). Experiential learning can take place in various subjects, such as during field trips in social studies. Tokkatsu, with its emphasis on "doing", and the period for integrated studies (sogoteki gakushu no jikan) are, however, central periods in terms of experience. School events and long-term stayovers are both included in tokkatsu in the curriculum. Tokkatsu is a system of action, and it is a structuring of daily activities. It takes place every day, throughout one's school years (elementary–high school). For some activities, such as distributing lunches in small groups, it is a routine. For other activities, like classroom discussion, it is a process of creating. It is ubiquitous in school life, connecting activities which the children do not even think is under one umbrella.

6.2. Child-initiated activities

When "learning by doing", the important point, tokkatsu-wise, is that the activities are child-initiated. Therefore, in classroom activities (part of tokkatsu), for example, teachers are asked to hold back, to let the children be in charge. Thus, all children, even the shyest ones, are part of the rotation of daily monitors.

While the students are engaged in morning classroom activities under the guidance of the daily monitors, the teachers are often not present, even in the elementary school classroom. When the emphasis is placed too much on the activities going smoothly without the teachers, they can become overly routine. When the opposite happens, it can become chaotic. The balance depends on the needs of the child, the teacher, and the school. Thus, tokkatsu practices, even more than math and science, are built from the daily experience of teachers and their students. Lesson study, learning from colleagues and other teachers locally and nationwide, is crucial in improving one's classroom management skills. Lesson study itself is experiential learning for teachers.

6.3. Self-motivated, inner-motivated action

Very close in concept to child-initiated activities is the fact that tokkatsu emphasizes that children are supposed to eventually learn to do something voluntarily by understanding the meaning of the act or activity. Discussions in the class are one of the mechanisms through which this is supposed to happen. However, even in this chore-like and routine activity, children are encouraged to think about why they are cleaning. The teacher is leading a class discussion and uses questionnaires which suggest that children want a clean room, and pictures of trash left unattended on the floor after the children have left, to ask why the classroom isn't always clean, though everyone likes a clean classroom. The discussion then proceeds as to what can be done and what one can do. The students are led to find meaning in cleaning (e.g., the classroom is nicer to study in) and to "want to" spontaneously contribute. It is this goal of self-motivation that is at the core of tokkatsu thinking. Thus, cleaning is linked to

classroom discussion, and other activities which will help the child think of the meaning of cleaning and what the consequences are.

6.4. Cooperative learning

It almost goes without saying that tokkatsu involves cooperative learning, since it is a stated goal of the period. Classrooms are intentionally broken up into heterogeneous (e.g., girls and boys) small groups (han), which are then set for a certain period and which engage in activities that are done jointly. In Figure 2, the numbers indicate the classroom small group (han). This classroom has been divided into seven han. The inner circle can be twirled, indicating which han is in charge of where (or what) during a set period. For example, the green outer circle has the locations of the school grounds to be cleaned, such as the classroom (group for sweeping the floor and wiping the floor with a cloth), the library, and the hallways. Some schools include the restrooms. Note that these activities are toban, since they are seen as essential management activities which are necessary for the maintenance of the classroom and school. Thus, everyone is participating and taking turns.

Figure 2. Decision on cleaning *toban* locations.

Though students also engage in a certain classroom/school role, there are also kakari, in which children can choose what to do. For example, children might think a classroom newspaper is necessary, or perhaps preparing for fun activities. Those taking care of the classroom pet,or maintaining and planning events for the classroom mini-library, are also kakari. For the kakari, a child who likes books might want to become the book kakari.

The process of learning how to work together is also part of the goal. The group unit can be the small group, classroom, school, or the school club. The literature on cooperative learning, focusing on subject learning, has suggested that it enhances relationships between students of different backgrounds, such as between those of different races and ethnicities (Slavin, 1983, 1989; Johnson & Johnson, 1999). The Japanese characteristic is that the cooperation is extended to both subjects (e.g., han are used inside classes when engaging in group work) and nonsubject periods (e.g., tokkatsu), which are seen to complement each other.

Figure 3 visualizes the assumptions of cooperation between the children of a class. Subject matter knowledge and noncognitive learning are one. However, some children may have high subject scores, but be emotionally unstable. Others might be very strong in social skills, but not in the mastery of a certain subject matter. Tokkatsu-wise, each of these children, by coming together, can help each other grow, by contributing to create a place where everyone can feel a sense of belonging and feel as safe as possible.

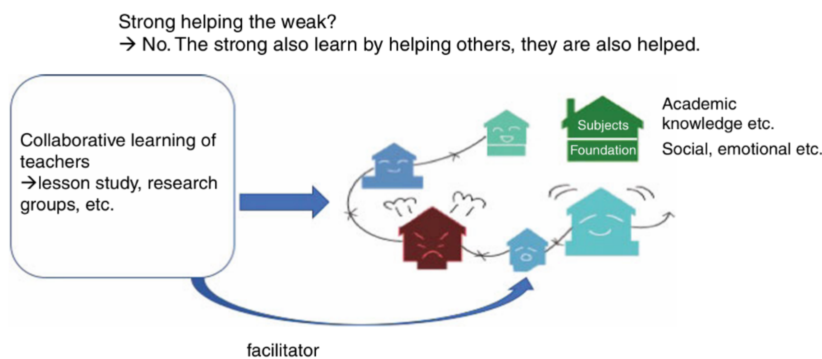

Figure 3. Cooperation between classmates.

6.5. Integration

Perhaps, one of the reasons tokkatsu is often hard to see is that the subjects and nonsubject periods in the Japanese curriculum intertwine. Figure 4 provides an example of nutrition education from elementary school. The school lunch newspaper, prepared by the nutritionist, explains the various nutrients for each meal. The nutritionist also explains where the food originated, with a special emphasis on local food. The week's menu is pasted in the hallway, and everywhere in Japan, one can find the nutrition circle, with the types of food and their nutrition filled in (see Figure 5).

In the home economics textbook, students, depending on whether they are in elementary or secondary school, learn about traditional Japanese food, make it in heterogeneous groups with boys and girls, and eat it. There may be a home economics club, which would, like all other clubs, produce or exhibit something for the school festival.

Figure 4. Nutrition education from elementary school.

Students also learn about the characteristics of western diets and traditional Japanese diets, or that skipping breakfast is not healthy. In addition, they learn that "eating alone" (koshoku) is rising, especially with the aging of society, and that this is not good for one's health. The same phenomena will be analyzed as a social problem in social studies. This may lead to an event in integrated studies to eat with the elderly in the community.

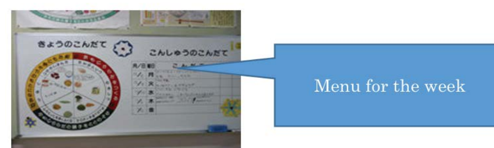

Figure 5. The nutrition circle.

In the period for integrated studies, children might also grow vegetables in the school garden, invite someone in farming to talk about how to grow vegetables, learn about nutrition related to the harvest, cook, and eat with people of the community. Both cognitive and noncognitive periods will be used. During the long-term group stayover on a farm, a tokkatsu event, chil dren might learn how to grow crops. They may also stay at a fishing village and learn about seafood which would strengthen the knowledge they gained in home economics. They would have learned about different professions in social studies.

School lunch (tokkatsu) would focus on food education and be linked to knowledge in social studies, knowledge and the actual act of making the food in home economics, hands-on experience during the period for integrated studies, etc. There would also be lunch toban (tokkatsu) who take turns serving a balanced lunch.

6.6. Collaborative problem-solving out of the classroom

The small group (han) experience of solving problems in elementary school onward serves as a basis for similar collaborative activities in the factory, company, and other settings. The small groups (han) in the Japanese classroom are set for a certain period of time and are usually devised to be diverse (e.g., gender).

The i.school model in this volume also utilizes collaborative techniques to solve real-life problems. Devising a tailor-made online post-it for collaborative work brings together ideas from different members, who can be on the other side of the world. This Japanese-style collaborative problem-solving has been applied to data analysis as well. For example, Japanese anthropologist Jiro Kawakita devised what is called the KJ method which utilizes post-it types of cards, which members of a group use to categorize and reveal underlining relationships between categories. The method has been used in corporations, schools, and in development projects (Scupin, 1997).

6.7. Egalitarianism

Egalitarianism, in the sense that the school provides everyone with the same basic experience, is also an ideology behind the tokkatsu activities. For example, the daily monitors (nichoku) are part of the division of roles within the classroom. The daily monitors start the classes and meetings,and are responsible for overseeing the state of the class that day. Often in a pair, their names are usually written in the front of the room on the blackboard, so that all the children know who is in charge.

Since there is an orientation toward egalitarianism in the above sense, all children take part in the rotation. Therefore, the shyest child in the class will also be up in front of the class on his/her daily monitor day. Sometimes, especially in elementary school in the formative years, you will have children who can barely speak in front of others serving as daily monitors. When the children in the class do not become silent when the daily monitor says, "Attention please" at the beginning of the meeting or class, either because they do not hear the monitor's words or do not heed them, the teacher might step in, asking the children to listen to the monitor. The monitor would repeat the directions, this time with attention focusing on her/him or them. Or, since these acts are repeated every day, a child with a louder voice, who is not the monitor for that day, might quiet the class so that the monitors can speak. This kind of behavior is encouraged and is possible because the tasks of the daily monitors are routinized so that all the children know what is expected. The challenge becomes how to set up a system in which even the shyest child in the class can take a leadership role (e.g., routinization of activities, making clear

what is expected, providing standard words to say), while also providing more active children to grow in their leadership roles as well. If the procedure becomes too controlled, it will become like a rehearsal, with children citing the given words of direction. If too unstructured, only those with strong leadership will be able to lead that day.

One of the major places where teachers learn how to build their class is by observing one's colleagues regularly in the in-school lesson study sessions, and in the local, national, and other similar meetings of the teachers' research groups dispersed around the nation. Lesson study is used in all of these contexts.

As mentioned before, lesson study has become quite well known abroad, and there are various groups around the world which now practice it. What is less known, however, is that there is lesson study for not just subjects, but for noncognitive education as well, since the Japanese curriculum is holistic. There are numerous teachers' organizations for med, led, and managed by teachers, which attract nationwide audiences. Teachers from completely different prefectures and schools would get together and learn from each other. Especially for periods such as tokkatsu and the period for integrated studies, which can be improvised more at the grass-roots level, it is really the teachers that have collectively formed what goes on in the classrooms. This teacher-initiated training system is what sustains the children's learning in the noncognitive sphere.

Now, because classroom management in Japan encourages each one to grow individually and together, classroom building (gakkyu zukuri), especially at the elementary school level where the classroom teacher is in charge of a wide range of subjects, is seen to reflect the ability of the teacher.

Though international comparisons suggest that reported student truancy in Japan is internationally low (OECD, 2018, p. 12), inside Japan, it is a significant topic, since it suggests a breakdown of the classroom community, which is the failure of classroom building (see Figure 6). In the locality, Myoko, the board collaborates with a national youth facility to utilize long-term group stayovers, which is a part of tokkatsu. Since the ideal of holistic education with an emphasis on an interpersonal framework leads to the call for growing and experiencing together, the school tries to give all the students a basic experience, not only in math but also in the noncognitive sphere. Thus, there are long term group stayovers in the wilderness, skiing, etc. The school offers clubs not just for the very athletic or artistic but also for everyone. Clubs are not designed to build character for the elite, but to build character for the mass. This in effect provides children whose families would not otherwise be able to give their child a certain experience (e.g., skiing) a chance to do so.

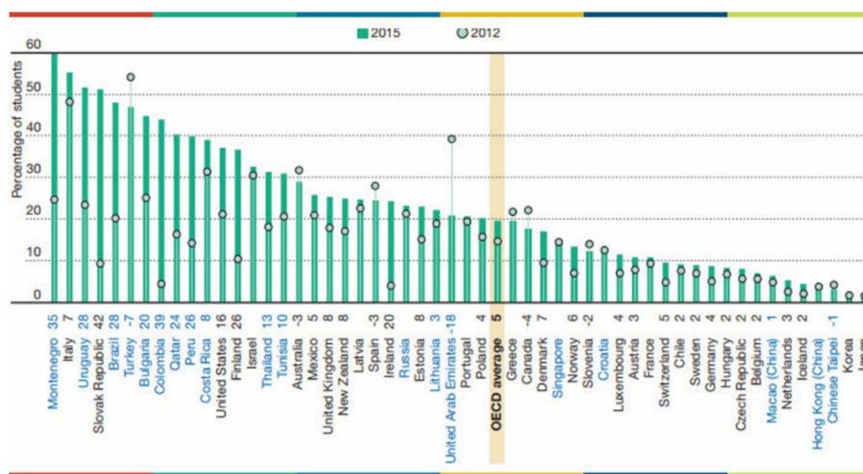

Figure 6. Change between 2012 and 2015 in student truancy percentage of students who reported that they had skipped a day of school in the 2 weeks prior to the PISA test.

In some districts, especially those with an identified discriminated against minority group, the egalitarian orientation in the Japanese sense (giving everyone a common experience) also takes on an anti-discriminatory equity perspective. Since the school tries to provide not only basics for subjects but also for the noncognitive and the contents are adjusted to the needs of their students, when schools identify a need in the noncognitive sphere, the schools will try to provide it.

For example, if the family cannot provide reading experiences, the school will do so. If the children are seen as lacking concentration, this can become the focus of the school. Schools with families in poverty may identify a large number of cavities as an indication of the lack of basic habits and emphasize brushing one's teeth after eating and the importance of a balanced diet. These are experiences which are the legitimate sphere of the holistic school and are emphasized even with middle-class children. Especially in the lower elementary-school grades,

observers might see toothbrushes lined up in front of the class. For those in poverty, the goal can be adjusted to meet the needs of that population within this common holistic framework. In the PISA collaborative problem solving results, the gap between low and high performers in collaborative problem solving was "narrower than it is on average across OECD countries, mainly because of the relatively high scores of low performers in Japan" (http:// www.oecd.org/pisa/PISA-2015-Collaborative-Problem-Solving-Japan. pdf, June 2018). The holistic framework, and the opportunities to engage in collaboration for all children, may be relevant.

Middle-class children, on the other hand, may be able to experience much of what tokkatsu gives at home, but not in a group context. Children in poverty may not be able to experience the activity at all if not for the non-cognitive emphasis of the school.

6.8. Education for life

What we can draw from such an analysis of the holistic framework is that a major characteristic of the Japanese model of schooling is that the school is seen as a place for an education for life, including subject matter and experiences which aim to strengthen noncognitive areas from an educational viewpoint. Life (seikatsu) often appears in the description of the Japanese school and is very much in line with the holistic view of education in tokkatsu. Since everyday life includes brushing one's teeth, cleaning up, and thinking about one's future, tok-katsu encompasses all of these activities. Sinks in schools around Japan, at whatever level, have soaps near the faucet and examples of how to wash one's hands in a way which gets rid of germs. Nutrition tables are pasted on the walls of the corridors everywhere.

The wide sphere of the Japanese school means that the teacher's role is extensive. In recent years, the issues faced by students and their families have become so complex that trying to address all of these has led to over work. There are now discussions on how to divide the labor with other professionals, while adhering to the ho-listic framework.

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