



Significance and Methods of Lesson Study on Extra-Subject Activities for the Development of Non-Cognitive Skills: A Case Study of Tokkatsu at a Japanese Junior High School

* *Tetsuo Kyomen*
University of Tsukuba

*Corresponding author: kyomen@human.tsukuba.ac.jp 1-1-1 Tennodai, Tsukuba, Ibaraki, 305-8572, Japan

AUTHOR'S NOTE

Acknowledgement: This work was supported by JSPS KAKENHI Grant Number JP24K00409.

ABSTRACT

Lesson study as a teacher training has spread from Japan to other countries as a means to enhance teachers' professional skills and improve schools as a whole, but its focus has been limited to academic subjects as cognitive learning area. In Japan, Tokkatsu as extra-subject activities have been implemented within the curriculum, and lesson studies have been conducted to develop non-cognitive skills.

This study aimed to examine the significance and methods of applying lesson studies to non-cognitive learning by analyzing a case study of a classroom meeting at a Japanese junior high school. The interviews with teachers indicated that they tended to voluntarily participate in lesson studies across subject boundaries, which can provide an opportunity to shift classroom management from a teacher-centric to a student-centric approach. Furthermore, a reciprocal relationship was established between Tokkatsu and lesson studies by forming a caring and learning community for both teachers and students. However, certain conditions are required to examine the real-life creative process between teachers and students.

Keywords: teacher training, lesson study, Tokkatsu, classroom meetings, non-cognitive skills, junior high school, Japan

INTRODUCTION

Lesson study as a teacher training disseminated from Japan to other countries as an effective means of not only improving the professional skills of individuals but also forming collegiality among teachers sharing a common educational vision and improving the school as a whole. However, as highlighted in *The Teaching Gap* by Stigler and Hiebert (1999), in an international comparison of mathematics classes, this area has been limited to subjects, such as cognitive learning. At present, the World Association for the Study of Teaching has 40 participating countries. An analysis of the presentation titles from the conferences held from 2007 to 2014 showed that mathematics and science were the most popular themes (Sakamoto, 2017). The evolution of research trends regarding lesson studies over time (Oyanagi, 2017) indicates that non-cognitive skills and extra-subject activities have received little attention. This is due to the fact that in many countries, with the exception of Japan, Taiwan, and South Korea, there is no national curriculum for extra-subject activities, and they have been considered extracurricular activities.

According to the Organization for Economic Co-operation and Development (OECD, 2015), cognitive skills interact with social and emotional skills and significantly impact individuals' subjective well-being and socioeconomic outcomes. Extra-subject activities are effective in their development, and The Collaborative for Academic, Social, and Emotional Learning website lists several learning programs. Lesson study of extra-subject activities promotes teachers' professionalism and collaboration to improve students'

non-cognitive skills.

In Japan, extra-subject activities have been implemented for more than 60 years under the name of *Tokkatsu* (*Tokubetsu Katsudo*) and have recently been expanded overseas, for example, Egypt. Tsuneyoshi et al. (2019) summarized the basic principles of these activities as learning-by-doing, self- and inner-motivated action, cooperative learning, egalitarianism, and education for life. Lesson studies conducted at school, regional, and national levels have contributed to the realization of these principles.

In *Tokkatsu*, discussions in classroom activities are typically completed in one credit hour unlike school events and are, therefore, easy targets for lesson study. There are two types of discussions: one in which students build consensus as a classroom on an agenda to improve their lives and another in which students make decisions as individuals on how to resolve their own issues and meet future goals by utilizing class discussions (MEXT, 2018). This study focuses on classroom meetings because they have received global attention.

International researchers are generally in agreement that classroom meetings have served the function of fostering students' sociality and maintaining order in the classroom (Kyomen, 2021). However, the interpretation of "individuality" is divided and depicts the contradictory functions of repression and development. The boundary lies in whether the classroom is viewed as a community that assimilates a particular value or a community that recognizes individual differences and creates value. According to Lewis (1995), for example, to prevent group uniformity, a "strong" sense of belonging should make each child feel secure, and personal responsibility for expressing objections to group reinforcement is required. Cave (2016) also emphasized the need to create groups that focus on mutual support, accept and celebrate the diversity of members, and help them grow into individuals who can think and act independently.

In other words, to harmonize the individual and the group and to balance the development of sociality and individuality, it is necessary to create a group that is inclusive of the diversity of individuals, which can make use of this diversity in school life. One mechanism for achieving this is consensus building. It means "acknowledging and coming to terms with differences and diversity of opinions" (MEXT, 2018), and it has been a central theme in lesson study on classroom meetings. Since there are no textbooks, and the content of instruction is vague, lesson study in *Tokkatsu* "tends to be formal, abstract, and superficial" (Sugita, 2011), and its methods, outcomes, and challenges have not been academically elucidated. In addition, Lewis (2023) stated that *Tokkatsu* can lay the groundwork for the successful practice of lesson study but does not indicate how the two are combined.

This study aimed to understand the significance and methods of applying lesson study to non-cognitive learning by analyzing a case of lesson study in classroom meetings at a junior high school in Japan. The reason for targeting a junior high school is that the group of teachers is divided into different subject specialties, and it is easier to identify differences from lesson studies in subject areas rather than in elementary schools.

METHODOLOGY AND DATA

Wolfe and Akita (2008) categorized eight research approaches to lesson study, and this study will use both the "descriptive approach," which explores the procedures and outcomes, and the "teacher study approach," which explores the perception of lesson study from the teacher's perspective.

The subject of this research was X junior high school (approximately 550 students) in a city in the Tokai region with a population of approximately 60,000. This school has been engaged in a four-year class study of classroom meetings in which students initiated discussions and reached an independent consensus from FY 2018 to FY 2021. Such practices are not uncommon in elementary schools in Japan; however, in junior high schools, class meetings tend to be conducted as teacher-led guidance (Yamada, 2020), and School X's challenges are progressive.

A lesson study session at School X consisted of 1–2 open classroom meetings and a 65-minute workshop. In the workshop, after a review by the opener teacher, the other teachers observed the classes engaged in a 40-minute dialogue, followed by 20 minutes of advice from an external supervisor. With interruptions due to the coronavirus disease 2019 pandemic, more than 15 sessions were held at School X, of which the author participated in 8 sessions. Based on the results, an interview guide was prepared that asked about the perceptions of the content, methods, outcomes, and challenges of classroom meetings and lesson study sessions.

Semi-structured interviews were conducted between July and August 2022 with nine teachers (A–I)

who had participated in at least five lesson study sessions (Table 1). As some

Table 1 Participant information

Teacher	Date of the interview	Age (in years)	Teaching experience (in years)	Subject	Experience with open class
A	7.18.2022	45	19	Technology	
B	7.25.2022	46	24	English	
C	7.25.2022	36	13	Social studies	✓
D	7.26.2022	41	19	Social studies	✓
E	7.29.2022	33	11	English	✓
F	8.1.2022	29	7	English	
G	8.1.2022	42	16	Physical education	✓
H	8.9.2022	28	6	Japanese	✓
I	8.10.2022	38	15	Physical education	✓

time had passed since these sessions, and some of the teachers had transferred to other schools, the stimulated recall method was employed. After watching a 5-minute video of their open classroom meetings and workshops, the participants were interviewed online. Each interview lasted approximately 45 minutes. The recorded audio data were transcribed, and open and focused qualitative coding was performed based on Sato (2008).

RESULTS AND DISCUSSION

As a result of the analysis, 63 codes were extracted and grouped into 12 categories belonging to 3 themes. Figure 1 is a story line showing the relationship between the codes. This section describes the main codes for each theme, examining the connections among categories and quoting representative teacher narratives.

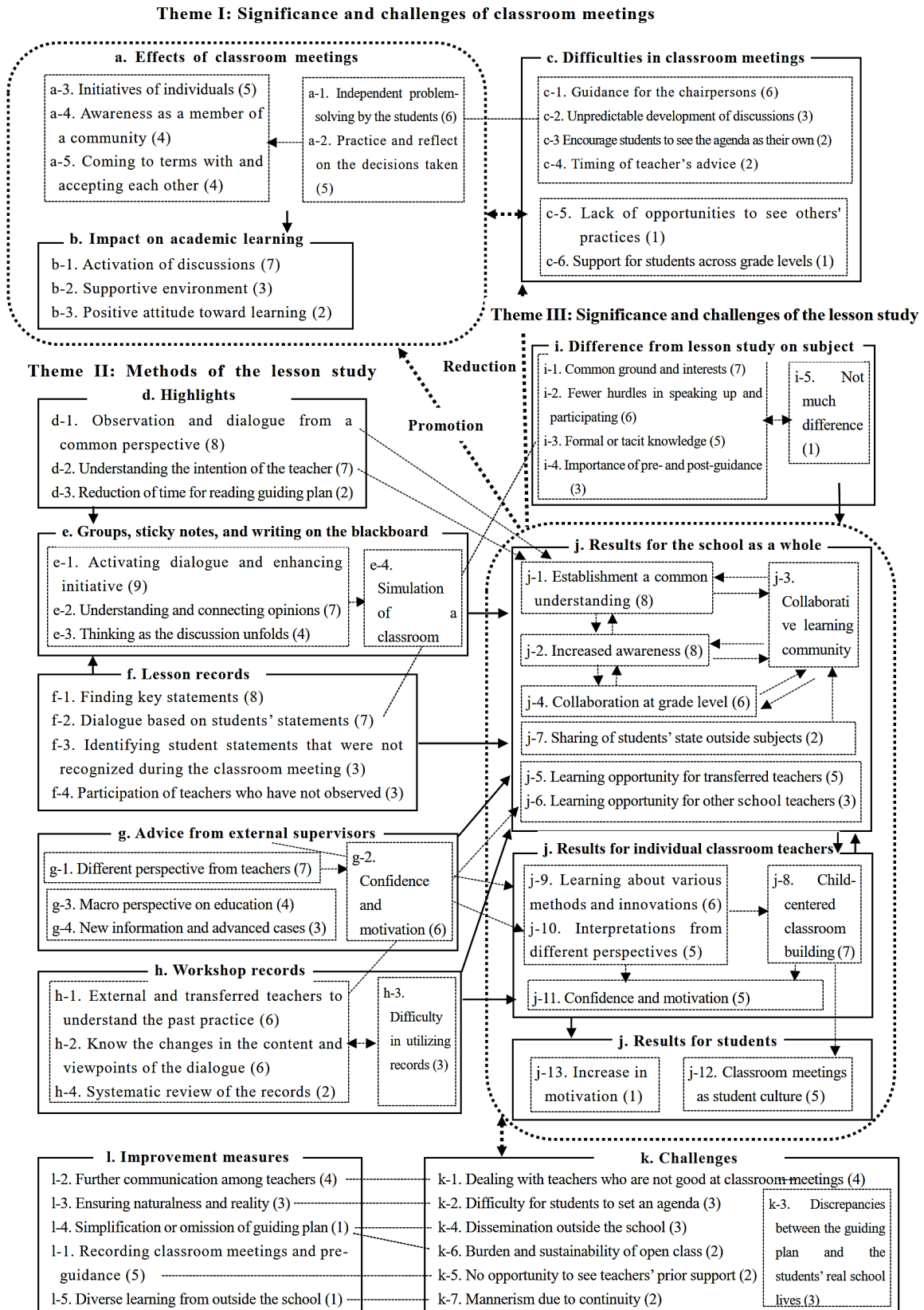


Figure 1 Teachers' perceptions and story line about lesson study in classroom meetings

*Numbers in parentheses indicate the number of teachers who mentioned that code

Theme I: Significance and challenges of classroom meetings

"a. Effects of classroom meetings" noted by the largest number of teachers is "a-1. Independent problem-solving by the students." They acquire the competency to "create their own lives" (A) through "the process of consensus building, that is, thinking for themselves, anticipating the future, and making decisions" (A). This leads them to "participate in discussions as their own" (D) in their regional community when they become adults and to "communicate their thoughts to others and manage human relationships" (H) in their workplace. The competency to "a-2. Practice and reflect on the decisions taken" is another effect. Teacher F shared an episode in which students agreed on an initiative to use greetings, put it into action the following morning, and reflected on it in the morning meeting.

All the teachers saw the students' growth through these classroom meetings as having a positive "b. Impact on academic learning." The "b-1. Activation of discussions" in the classroom led students to compare their own ideas with those of their friends (D) and to increase their involvement with children other than those they were close to (G). It also contributed to the fostering of a "b-2. Supportive environment," and an atmosphere was created in which "any opinion could be expressed and would be accepted" (E).

Meanwhile, teachers also realized the "c. Difficulties in classroom meetings" and the effectiveness of classroom meetings. Regarding "c-1. Guidance for the chairpersons," the teachers found it difficult to have sufficient time to hold pre-meetings (B, C, G, and H). When opinions were not expressed at meetings, "how to make the chairpersons think flexibly and reach out to classmates" (F), was also an issue. The characteristic of "c-2. Unpredictable development of discussions" is another aspect of classroom meetings. Since it is an autonomous student-led activity, "Teachers have difficulty reading the flow of the discussion" (B), and "it is challenging to allocate time" (I) to reach a consensus in 50 minutes. In addition, relatively inexperienced teachers mentioned the distress of "c-3 Encouraging students to see the agenda as their own."

Theme II: Methods of the lesson study

A pertinent question is how teachers perceive innovation in lesson study sessions whose purpose is to overcome these issues. Regarding "d. Highlights of lesson," which is correspondence issued by the chief academic teacher, teachers recognized that it led to "d-1. Observations and dialogue from a common perspective." The correspondence can "help young teachers who, in particular, have a hard time determining which perspective to consider in classroom meetings" (E). At the workshops, "dialogue is more focused when teachers are looking at things from the same point of view rather than talking freely" (C).

All teachers recognized that "e. Groups, sticky notes, and writing on the blackboard" in workshops had the effect of "e-1. Activating dialogue and enhancing initiative." Writing various sticky notes in small groups helped them organize their thoughts and make the dialogue their own (B). This process led to the strong feeling that "all the participants were learning together by contributing to the workshops" (C). Sticky notes on the blackboard also had the effect of "e-2. Understanding and connecting opinions." When interesting keywords appeared, they wanted to know what was discussed about them (D), which deepened the discussion. Being able to see the keywords helped to connect opinions such that they were not self-serving (E). In this manner, workshops took on the role of "Tokkatsu for adults" and became a "e-4. Simulation of a classroom meeting" (E).

The use of "f. Lesson record" was effective in "f-1. Finding key statements." It "clarified statements that changed the course of the discussion" (B). Understanding the turning points made it easier for the participants to consider "what should have been done in the case of this statement" (H). It also contributed to "f-2. Dialogue based on students' statements." Without records on "this student made this remark at this time," the dialogue in workshops "turned into an empty argument" (A), and "opinions became persuasive and reinforced" (F) by using the lesson record as a basis.

The "g. Advice from external supervisors" at the end of the workshop allowed for "g-1. Different perspectives from teachers." Teachers in the same school "were left to their own world" (B) and "were inevitably biased toward their own way of seeing and thinking" (E) without the advice. Hearing the lectures of supervisors who have seen and studied diverse practices and gaining new perspectives led to "g-2. Confidence and motivation." "Being encouraged a lot and getting recognition for what they were doing in the lesson study" motivated them to "try a little harder the next time" (F).

"h. Workshop records" accumulated at School X are useful for "h-1. External and transferred teachers to understand the past practice" and "h-2. Know the changes in the content and viewpoints of the dialogue." Teachers can gain insight into what happened in the first, second, and third years of the four years by reading the records" (B). However, some teachers pointed out the "h-3. Difficulty in utilizing records." "It is not easy to look at the records" in advance because they are distributed on-site in the workshops" (H).

Theme III: Significance and challenges of the lesson study

How do teachers perceive the impact of four years of lesson study ? We examined four categories.

1. "i. Difference from lesson study on subject"

All teachers noted that "i-1. Common ground and interests" tend to be created. Since homeroom teachers are invariably involved in classroom meetings, they were all able to discuss it on the same ground and with a sense of necessity (E). Another factor was "i-2. Fewer hurdles in speaking up and participating." In a lesson study on a certain subject, "it is difficult for teachers who are not in charge of it to ask or talk in depth, since students are taught by different subject specialists" (I). However, "it is easy to talk and learn about the classroom meeting for homeroom teachers" (I). "i-3. Formal or tacit knowledge" are the other differences between the subjects and classroom meetings. While the teaching in subjects is, to a certain extent, verbalized in terms of specific instructional techniques, the facilitation in classroom meetings is "not verbalized to a large extent" (G). Therefore, the dialogue focused on "how the teacher's movements should be carried out" in the case of the workshop on subjects whereas the "dialogue was focused on students' activities" (E) in classroom meetings.

2. "j. Results"

One of the results for the school as a whole was "j-1. Establishing a common understanding" of classroom meetings. The formation of "a common perception of what everyone want to achieve together" (G) has changed the classroom meetings, which used to depend on each homeroom teacher's approach. All teachers shared the common goal of classroom meetings in which students discussed together rather than the teacher playing the central role" (D). This change led to an "j-2. Increased awareness" of classroom meetings, and the creation of "a space where everyone can learn how to facilitate students, even if teachers don't understand it" (C), which promoted "school-wide awareness to do their best in classroom meetings" (C). Furthermore, the lesson study contributed to the development of a "j-3. Collaborative learning community." According to Teacher E, every teacher was able to talk about their classroom meeting on a common ground; therefore, "the atmosphere of learning from each other was created."

One of the results for individual classroom teachers was the shift to "j-8. Child-centered classroom building." Teacher C "became aware of the need to allow the students to take the initiative and enhance the classroom community." The lesson study also provided an opportunity to "j-9. Learn about various methods and innovations" in classroom meetings. Teacher H learned about the methods that they did not know, and they could get many ideas from other teachers who were using thinking tools that they had never used before." From the perspective of the openers of classroom meetings, one outcome was "j-10. Interpretations from different perspectives." Teacher E was grateful for comments from her colleagues that her approach was suitable and feedback that examination from another angle was needed.

These feedbacks also led to "J-11. Confidence and motivation" for classroom meetings and management. For Teacher E, their experience of open classroom meetings is now "an asset and a weapon," and provided the opportunity to learn a lot about how to deal with students.

The results for students was also discovered, that is, "j-12. Classroom meetings as student culture" have taken root. "Even first-time teachers can manage classroom meetings" because "the children have the know-how" (A).

3. "k. Challenges"

One of the challenges was "k-1. Dealing with teachers who are not good at classroom meetings." While the common understanding of classroom meetings increased, "some of these were practices without full follow-up by colleagues" (C). The reflection that "it is important to involve teachers who want to do their best but are not good at it" (E) was indicated. Another challenge was "k-2. Difficulty for students to set an agenda" at their own initiative in a planned lesson study session, despite the fact that classroom meetings are essentially "autonomous activities." The most ideal situation would be for the students to "set the agenda they really want to discuss" based on "the problems they are having in the classroom (D)," but it is difficult because the session is held at a specific time of the year. This is linked to the problem of the "k-3. Discrepancies between the guiding plan and the students' actual school lives." There is a possibility that the "agenda and process of the classroom meetings gradually change through dialogue with the students from the guiding plan made a month prior and will finally be completely different" (D).

4. "l. Improvement measures"

Teachers offered recommendations to solve these challenges. "l-1. Recording classroom meetings and pre-

guidance" would promote understanding of "how the classroom teachers instructed the chairpersons in advance" (E) and ensure "participation" (A) of teachers who have duties at the time of the open class. "1-2. Further communication among teachers" is required. Participant C shared that, "If they are well aware of the benefits of classroom meeting, such as how it makes classroom environment better, they will be more inclined to do it." To achieve this, Teacher G shared how individual students and their classroom community "change" as they put into practice what they have decided, that is, a "transformation every day." Regarding the conflict between lesson study involving the preparation of guiding plans and classroom meetings as students' autonomous activities, "1-3 Ensuring naturalness and reality" is crucial. The need to conduct "live class meetings" rather than "made-up class meetings" was emphasized (A). Teacher D suggested that only those who are able to attend will observe class meetings with a student-created agenda proposal but without a guidance plan, and shared that when "the students come up with a agenda they want to discuss, it would be interesting for teachers."

CONCLUSION

Teachers at X junior high school viewed classroom meetings as an educational activity that fosters agency (OECD, 2019) among other non-cognitive skills and engaged in lesson studies on independent consensus building by the students. Unlike academic subjects that rely on knowledge and materials from a specific scientific field, classroom meetings are creative, real-life processes between teachers and children. Since it was of common interest to classroom teachers, they tended to voluntarily participate in lesson studies across subject boundaries. This participation can provide an opportunity to shift classroom management from a teacher-centered to a child-centered approach. Lesson study in classroom meetings can also contribute to the development of lesson studies on subjects by forming a professional community of teachers (Hargreaves, 2003) and a caring and collaborative learning community for teachers and students (Lewis, 2023). Thus, a reciprocal relationship can be established between Tokkatsu and lesson studies.

This case study suggests eight effective strategies for facilitating reciprocal relationships. First, when observing classroom meetings, the focus is placed on sharing perspectives based on a common understanding of the skills to be developed and the intentions of the teacher. Second, to be able to visualize teachers' tacit knowledge that has not been verbalized, the dialogue should be based on students' statements, referring to the lesson records. Third, it provides many teachers the opportunity to express their opinions and visualize and structure their content. Fourth, advice from supervisors should give meaning to the practice from a perspective different from that of the teachers and contribute to their confidence and further motivation. Fifth, maintaining a record of lesson studies generates learning opportunities for teachers who are new members of or outside the school community. Sixth, the necessity of guiding plans, which are considered essential for lesson studies on subjects, should be questioned, and natural daily activities should be the target of lesson studies. Seventh, video recording allows learning with teachers' prior support for students' autonomous activities. Eighth, since assessing non-cognitive skills in the short term is challenging, specific changes in students after the meetings should be shared.

This study has certain limitations. It targeted only classroom meetings among the extra-subject activities. The case study was conducted at only one junior high school. The analysis included only the perspective of the teachers' perceptions. In the future, it will be necessary to expand the range of schools and activities to take their characteristics into consideration and examine the methods and effects of lesson study for the development of non-cognitive skills by focusing on students' perceptions as well.

REFERENCES

- Cave, P. (2016). *Schooling selves: Autonomy, interdependence, and reform in Japanese junior high schools*. The University of Chicago Press.
- Hargreaves, A. (2003). *Teaching in the knowledge society: Education in the age of insecurity*. Teachers College Press.
- Kyomen, T. (2021). Kaigai no Kenkyusha kara mita tokkatsu no kino to mekanizumu: Gakko no ssunogurafyi de tokubetukatsudo ha do egakaretekitaka [Functions and mechanisms of Tokkatsu from the viewpoint of foreign researchers: How Japanese extracurricular activities have been portrayed in school ethnographies]. *Bulletin of Institute of Education, University of Tsukuba*, 46(1), 1–14 (Japanese).
- Lewis, C. (1995). *Educating hearts and minds: Reflections on Japanese preschool and elementary education*. Cambridge University Press.
- Lewis, C. (2023). Japanese curriculum study: Can it leverage change around the world? *The Japanese Journal of Curriculum Studies*, 33, 99–108.
- Ministry of Education, Culture, Sports, Science and Technology (2018). *Chugakko gakushu shido yoryo kaisetsu tokubetsu katsudo Hhen* [Commentary on the Courses of Study for junior high school: Tokkatsu edition]. Higashiyama Shobo (Japanese).
- OECD (2015). *Skills for social progress: The power of social and emotional skills*. OECD Publishing.
- OECD (2019). *OECD Future of Education and Skills 2030: OECD Learning Compass 2030* [Online]. <https://www.oecd.org/en/about/projects/future-of-education-and-skills-2030.html> [August 20, 2024].
- Oyanagi, W. (2017). Lesson study no keifu to sono doko [Genealogy and trend of lesson study]. In W. Oyanagi & Y. Shibata (Eds.), *Lesson study*. Minerva Shobo, 2–18 (Japanese).
- Sakamoto, M. (2017). Sekai jugyo kenkyu gakkai no kenkyu doko: Happyo domoku no keiryoteki bunseki wo toshite [Research trends in World Association of Lesson Studies: Through a quantitative analysis of presentation titles]. In W. Oyanagi & Y. Shibata (Eds.), *Lesson study*. Minerva Shobo, 209–225 (Japanese).
- Sato, I. (2008). *Shitsuteki deta bunsekihou: Genri houhou zhissen* [Qualitative data analysis: Principles, methods, and practices]. Shinyosha (Japanese).
- Stigler J. W., & Hiebert, J. (1999). *The teaching gap: Best ideas from the world's teachers for improving education in the classroom*. Free Press.
- Sugita, H. (2011). Tokubetsu katsudo ni okeru shidoryoku no jojo to zyugyokenkyu no zyuzitsu [Improving guidance skills and lessons in tokkatsu]. *Primary Education*, 876, 54–57 (Japanese).
- Tsuneyoshi, R., Sugita, H., Kusanagi, K., & Takahashi, F. (Eds.). (2019). *Tokkatsu: The Japanese educational model of holistic education*. World Scientific Publishing.
- Wolfe, J., & Akita, K. (2008). Ressun Sutadei no kokusai doko to zyugyokenkyu heno toi: Nihon America Hong Kong ni okeru lesson study no hikaku kenkyu [International trends in lesson study and questions for jugyo kenkyu: A comparative study of lesson study in Japan, the United States, and Hong Kong]. In K. Akita & C. Lewis (Eds.), *Zyugyo no kenkyu kyoshi no gakushu: Lesson study heno izanai* [Study of jugyo and learning for teachers: Invitation to lesson study]. Akashi Shoten, 24–42 (Japanese).

*Significance and Methods of Lesson Study on Extra-Subject Activities for the Development of Non-Cognitive Skills:
A Case Study of Tokkatsu at a Japanese Junior High School*

Yamada, M. (2020). Chugakko ni okeru gakyukatsudo "hanashiaikatsudo" no donyu ni kansuru akushonrisachi [Introducing class discussion into junior-high school classes: An action research study]. *Journal of the School of Education, Sugiyama Jogakuen University*, 13, 73–85 (Japanese).