
Curriculum, Instruction and Assessment in Japan

Beyond lesson study

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First published 2017

ISBN: 978-1-138-89251-4 (hbk)

ISBN: 978-1-315-70911-6 (ebk)

Chapter 5

Historical overview of lesson study

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Introduction

Recently, the Japanese ‘lesson study’, a method of in-school teacher training in which teachers learn from each other through conferences before, after, or during lesson presentations, has been recognised not only in the United States, but also throughout the world with the publication of J. W. Stigler and J. Hiebert’s (1999) *The Teaching Gap* (Hashimoto, Tsubota, & Ikeda, 2003; Lewis & Akita, 2008). Since the establishment of the modern Japanese school system, teachers in Japan have conducted studies examining their own approaches to education by maintaining written records of educational practices, voluntarily establishing educational groups and research organisations, and by organising lesson studies wherein instructors review lessons as a group. This culture, in which teachers learn freely from one another, has contributed to the outstanding quality of Japanese education.

Lesson studies have garnered significant attention in recent years; however, they are merely one component of teachers’ studies, and there are various approaches to in-school teacher training in Japan. Most importantly, teachers in Japan have published numerous records of educational practices that describe events and interactions with specific children in classrooms from a first-person perspective in a narrative style. These records have enabled teachers to share concrete examples of exceptional educational practices, in addition to thoughts and insights to support such practices. In order to identify factors that have been instrumental in contributing to the high quality of Japanese education, it is important not to simply imitate lesson studies in form, but to learn from the contents of educational practices that are unique to Japan by examining practical records. Moreover, it is important to be aware of the complex lineage of the Japanese lesson study.

This chapter provides an overview of the history and characteristics of post-World War II Japanese educational practices, in addition to a history of lesson studies specifically, including a discussion of its contemporary challenges. In doing so, this chapter demonstrates how some forms of the Japanese lesson study (i.e., the design-oriented, efficiency-dominant lesson study and the interpretation-oriented, creativity-dominant lesson study) are being implemented in other countries. This chapter also discusses the existence of educational practices and lesson studies of different origins and the need to re-evaluate them (Ishii, 2006).

I The historical development of the Japanese lesson study and teaching practices

I-1 The historical origins of the Japanese lesson study

The historical origins of the Japanese lesson study date back to the early Meiji era, with the launch of an elementary school based on the 1872 Education Code. M. M. Scott, an American educator, was subsequently invited to Japan in order to introduce and propagate the Western-influenced whole-class method of lecturing. Model instructional methods were then developed in the normal schools and the schools attached to them, and attempts were later made to spread these methods from Tokyo to all other regions. Initially, this was accomplished by distributing publications and through lecturer classes concerning new teaching methods. However, to assist instructors in mastering these methods in practice, teacher training was conducted; this involved the creation of detailed lesson plans, the presentation of research lessons, and lesson evaluation meetings that included observations.

This training method based on the observation and evaluation of lessons was established in the 1890s at all Japanese schools in tandem with the spread of the Herbartian tiered teaching method (Inagaki, 1995). Lesson studies that focus on developing, introducing and disseminating specific models of teaching tend to emphasise the study of lesson plans in advance, followed by the discussion of techniques and lesson methods during post-lesson conferences. Even today, this technique-oriented form of lesson study is implemented in public research meetings at many schools and remains in the daily consciousness of Japanese teachers. Furthermore, it is one point of origin for the modern Japanese lesson study. It should be noted, however, that the form of lesson study highlighted by Stigler and Hiebert is based on in-school teacher training performed by educational administrators, and therefore shares a common lineage with this techniques-oriented lesson study.

The push to reconsider lesson study focused on the development and dissemination of the lesson methods surfaced with the appearance of the Free Education Movement during the Taisho era. Teachers of the Ikebukuro Jidou no Mura Elementary School, who aimed to establish a child-centred 'liberal' education, pioneered the aforementioned narrative-style records of educational practices, which were modelled after Japanese I-Novels (Asai, 2008). Rather than lesson methods, these records of educational practices utilised the live classroom experiences of teachers and children, and hence enabled teachers to discover themselves as educators who had educational missions and rolls beyond national intent while referring to children by their proper names. Furthermore, these records substantiated the act of teachers conveying their personal, practical experiences in their own words and signified the birth of teachers as research practitioners.

This tradition, wherein teachers performed autonomous practical research, became dormant during the 1930s with the approach of World War II and the

implementation of Imperial National Training Education. It was revived, however, following World War II and the emergence of democratic education; this, in turn, led to the production of numerous practical records. This was particularly apparent during the early post-war period, wherein a torrent of notable records of educational practices were published successively by teachers partaking in life writing, beginning with Seikyo Muchaku's *Yamabiko gakko* (School Echoing in the Mountains) (1951) and Kenjiro Konishi's *Gakkyuu kakumei* (Classroom Revolution) (1955). Most of the practical records published during this period focused on children's writings (namely essays) and the life skill training surrounding them. In contrast, the practical records of Kihaku Saito and Shima Elementary School teachers (e.g., *Mirai ni tsunagaru gakuryoku* [Academic Achievements that Lead to the Future] [1958]) recount the classroom experiences of instructors and students and demonstrate the potential of conducting classes based on facts extracted from actual practices.

According to Saito (1964), structure of teaching is characterised by a series of tense relationships between children, instructional materials and the teacher. For example, a tense relationship exists between the essence of instructional materials and a teacher's interpretation of them. Tense relationships also arise between teachers and children in interactions during the teaching process. Likewise, tension exists between a child's knowledge and skill level and the requirements of instructional materials. Moreover, tense relationships develop as children exchange opinions amongst themselves. When these relationships become manifest in desirable forms, both teachers and children are capable of discovering and producing something new, and students can obtain a depth of thinking otherwise unattainable through individual learning. Hence, Saito likens the classroom instruction to a drama, wherein children, instructional materials and teachers are performers. Saito's theory and practice was an ideal conceptualisation of the post-war Japanese classroom instruction: a creative whole-class teaching in which the thinking of children is collectively orchestrated by means of an instructor's artful skill. This produced a teacher culture wherein excellence in the art of teaching was emphasised in the form of a so-called 'jugyo-dou'.

Beginning in the late 1950s, organised lesson studies and research on teaching by university researchers were developed (e.g., Zenkoku Jugyou Kenkyu Kyogikai (the Council for Nationwide Lesson Study) in 1963 and Kyojugaku Kenkyu no Kai (the Didactic Studies Association) in 1973), which were led and inspired by Saito's creative educational practices. Therefore, a generalisation of the principles of an exceptional teaching (i.e., the creation of didactics) was proposed through the creation and analysis of lesson records (National Association for the Study of Educational Methods, 2009). With the goal of promoting didactics in mind, researcher-performed lesson studies seek to determine what to teach and how it should be taught based on excellent classroom practices, in addition to research conducted by non-government education research organisations concerning subject content and instructional materials, which was mentioned in Chapter 2 (Shibata, 1967; Sugiyama, 1984).

Researchers, along with teachers, have re-examined existing subject content and instructional materials and have also debated its relevance and relationship to understanding subject content, even during the reorganisation of communication processes in lessons. Furthermore, a considerable number of researchers regard the essence of teaching to be a human art form and emphasise the creative skill required of teachers in designing educational activities, rather than discrete and mechanical lesson techniques. Thus, some theoretical frameworks have been developed that clarify points regarding practical judgements and considerations, which are consistent with the internal processes employed by instructors in their teaching practices (Yoshimoto, 1983; Fujioka, 1989). These differ from describing the construction of a teaching process from the outside (i.e., extracting the type and stage of lesson development that will become the analysis framework for classroom activities and the development and propagation of a corresponding class or lesson method).

1-2 The development of various post-World War II teaching practices

This section summarises the historical development of post-World War II teaching practices in Japan in light of representative practical records from each period (Tanaka, 2005, 2009). In the new era of education that followed World War II, empiricism, child-centred approach and life unit learning prevailed in classrooms nationwide. For example, the Japanese language teacher Hama Omura used clippings from newspapers and magazines as learning materials in classrooms that lacked desks, chairs, textbooks, or blackboards; it was against this backdrop that she developed the unit method of teaching, wherein children learn by their own initiative. In her book entitled *Oshieru toyuu koto* (What Teaching Is) (1973), Omura describes the essence of teaching and the role of an instructor based on her own practical experiences. As mentioned earlier, there was newfound interest in life writing during this period, in addition to the spread of practices intended to unify life and education. For example, Yoshio Toi, a well-regarded contemporary of Saito, penned *Mura wo sodateru gakuryoku* (Academic Abilities to Develop a Village) (1957), which is based on life writing and descriptions of creative lessons derived from ‘productive failure’, the naïve thinking and misconceptions of children in their daily lives. Furthermore, as national control over education strengthened in the 1950s, Saito attempted to demonstrate the potential of teaching as a profession, in addition to the creative nature of conducting a class based on authentic descriptions of classrooms (cf. *Jugyō Nyūmon* [Introduction to Teaching] [1960]).

In the 1960s, criticism of the child-centred approach arose, and national courses of study came to be ‘announced’ to have legal binding force. Various non-government education research organisations (e.g., the Association of Mathematical Instruction, the Hypothesis-Verification-Through Experimentation Learning System Research Group, and the History Educationalist Conference of Japan)

attempted to integrate science and education and proceeded to develop plans for the creation of unique subject content and instructional materials (i.e., the modernisation of subject content). Kazuaki Shoji in his book entitled *Kasetsu jikken jogyou to ninshiki no riron* (Hypothesis-Verification-Through Experimentation Learning System and the Theory of Recognition) (1976) proposed an approach to science education based on the Hypothesis-Verification-Through Experimentation Learning System. This instructional method was originally proposed by Kiyonobu Itakura in the 1960s and emphasises experiments that meaningfully convey fundamental scientific concepts, principles and rules (e.g., students may be asked to determine whether steel wool will become heavier or lighter upon being burnt). Hence, investigations such as these begin with the presentation of a problem, followed by a prediction, an argument and then an experiment.

Seiki Suzuki's *Kawaguchikou kara gaikou e* (From the Kawaguchi Harbour to the Harbour Abroad) (1978) proposed the use of tangible objects during social studies lessons in order to promote the understanding of social scientific concepts and laws that cannot be physically observed. On the other hand, in 1958, pioneers in Japanese social studies such as Kaoru Ueda and Takayasu Shigematsu began to criticise moral education and the teaching of systemism, and consequently spear-headed the Syoshinokai (the Society for Achieving the Original Spirit of Social Studies), which entails the cultivation of proactive and independent individuals who are capable of bearing the responsibilities of a democratic society. This is embodied in the lesson studies published by Toyama City's Horikawa Elementary School in 1959, which provide valuable insight into the promotion of independent thinking among children.

With the emergence of meritocracy in the 1970s, the problem of school drop-outs became apparent. Accordingly, Hiroshi Kishimoto's *Mieru Gakuryoku, Mienai Gakuryoku* (Tangible and Intangible Academic Ability) (1981) highlighted the need to account for a student's lifestyle and the cultural environment in his or her home, while also proposing methods to establish basic academic skills, such as *hyaku masu keisan* (hundred-square calculations). Likewise, Nakamoto Masao's *Gakuryoku e no chousen* (Striving for Academic Achievement) (1979) provided practical examples of how to teach differential and integral calculus to students at bottom-tier schools in an enjoyable manner through the creation of relevant instructional materials and the utilisation of appropriate tools, such as by teaching mathematical functions using a 'black box'.

Throughout the 1970s and 1980s, the Association of Mathematical Instruction and the Hypothesis-Verification-Through Experimentation Learning System Research Group sought to create 'enjoyable lessons', thereby leading to a re-evaluation of instructional materials and subject content from the perspective of children's independence and the logic of real life. In *Kodomo ga ugoku shakaika* (Social Studies Made by Children) (1982), Toshio Yasui proposed a practice wherein students reflect on historical events in a manner whereby the problems associated with a particular occurrence become their own, thus leading to an empathetic understanding of the viewpoints held by various historical

parties and, most importantly, people. Likewise, in his book entitled *Omatsuri eigo gakushuu nyuumon* (An Introduction to Festival English Learning) (2007), Shigemitsu Ahara maintained that English language learning should entail not only the acquisition of basic communicative skills, but also the study of language that facilitates communication with others using each of the five senses. Likewise, in *Rika no toutatsumokubyou to kyousaikousei* (Science Attainment Targets and Instructional Material Construction) (1990), Yasutaro Tamada asserted that science lessons should promote the attainment of targets; Tamada proposed a learning task method designed to guide students toward natural and correct awareness by means of experiments and debates centred around learning tasks.

In the mid-1980s, increased attention was placed on teaching skills such as questioning, directing and blackboard use among instructors who were fearful of potential classroom failures and prone to anxiety during the planning of daily lessons. Yoichi Mukoyama's *Tobibako ha daredemo tobaserareru* (1982), which introduced the technique of encouraging a child to leap over a vaulting horse, was the starting point for a movement toward the development of teaching skills based on the sharing and identification of hidden skills in everyday practices. Furthermore, Kazumasa Arita's *Kodomo no ikiru shakaika jugyou no souzou* (Creating Social Studies Lessons That Children Live) (1982) introduced a social studies teaching practice based on the use of instructional materials that children are capable of earnestly investigating. Hisako Tsukiji, a teacher at Andou Elementary School in Shizuoka City (which was a representative practice school for the Syoshinokai), wrote *Ikiruchikara wo tsukeru jugyou* (Classes That Instil a Zest for Living) (1991). In it, she argued that lessons should encourage lively debate and deep inquiry among children; to achieve this, Hisako suggested that teachers should evaluate and steer the thinking processes of children according to individual learning records and seating charts.

As the movement toward an 'escape from learning' progressed during the 1990s, lessons were created with an emphasis on re-examining the meaning of in-school learning and asserted that children should be the central focus of education. Kazuko Otsu's *Shakaika: Ippon no banana kara* (Social Studies: From a Single Banana) (1987) includes classroom records pertaining to modern society that begin with familiar subjects (e.g., a banana), which are then expanded upon to address topics related to developmental and global education. Kimiaki Kato's *Wakuwaku ronsou! kangaeru nipponshi jugyou* (Japanese History Lessons for Exciting Debates) (1991) features lessons wherein high school students are asked to form hypotheses as real historians in order to examine and debate Japanese historical mysteries.

Takayuki Koderu's *Chikyuu wo sukue! Suugaku tanteidan* (Save the Earth! Math Detectives) (1996) consists of math lessons that require students to use their knowledge of mathematical functions to solve problems related to environmental issues, such as waste disposal and the effect of Freon gas on the ozone

layer. Moreover, Kazuko Yoshida's *Feminism kyōiku jissen no souzou* (Creating Feminist Educational Practices) (1997) describes home economics lessons that require students to set and investigate learning tasks based on their lived experiences, which can then be linked to modern societal issues.

Toshiro Kanamori's *Sei no jugyō, shi no jugyō* (Lessons on Sex [or Life] and Lessons on Death) (1996) contains 'life learning' accounts from elementary school classrooms; the focus of these lessons is to convey the realities of life and death to children. Also, Hiroshi Imaizumi's *Manabi no hakken yomigaeru gakkō* (Schools That Revive the Discovery of Learning) (2001) discusses teaching practices that promote a classroom atmosphere in which students can speak freely, wherein their mistakes are positively supported. Indeed, the traditions of life education and life writing continue to thrive in these practices.

Integrated studies were adopted in the 1998 National Course of Study, and a specified period was allotted to them. Following this, Wako Elementary School (a Core Curriculum Association's experimental school emphasising life education) released a three-volume series entitled *Wako shōgakkō no sōgō gekushū* (Integrated Studies from Wako Elementary School) (2000). Similarly, Mitsuo Otaki, Toshihiko Koda and Kenji Morozumi published *Sodate-taine, konna gakuryōku: Wako gakuen no ikkan kyōiku* (Academic Abilities You Want to Foster: Wako School's Comprehensive Education Programme) (2009). Hajime Obata's *Soko ga shiritai 'kodomo ga tsunagaru' gakushūshidō: naze 'nara jōshidaigaku fuzoku shōgakkō no kō' no gakushū ha fukamarunoka* (What We Want to Know About Child-led Educational Guidance: Why Learning among Children at the Elementary School Attached to Nara Women's University Has Improved) (2007) summarises educational practices at traditional child-centred schools since the beginning of the Free Education Movement during the Taishō era.

Shinichiro Hori's *Kinokuni kodomo no mura: watashi no shōgakkōzukuri* (Kinokuni Children's Village: How I Built an Elementary School) (1994) describes educational practices that are intended to assist in establishing a liberal/free school similar to A. S. Neill's Summerhill School. *Tomo ni manabi, Tomo ni ikiru 1, 2* (Learn Together, Live Together) (2012) was released by Ina Elementary School and highlights practices from long-term, child-centred integrated studies wherein children learn from life experiences, such as by raising pigs until they are ready to be processed for meat. Moreover, Toshiaki Ose and Manabu Sato's *Gakkō wo kaeru: Hamanogo Shōgakkō no gonēkan* (Changing the School: Five Years at Hamanogo Elementary School) (2003) addressed the essence of school reform and discussed the authors' efforts to promote a community of learning.

Therefore, by using practical records to summarise the processes involved in facing and overcoming challenges, Japanese teachers have compiled accounts of creative educational practices, while also becoming the subjects of their own practical research.

2 Contemporary issues in lesson study in Japan

2-1 *The paradigm shift theory of lesson study in the 1990s*

Since the 2000s, in-school teacher training focused around open classes has been conducted in various schools in Japan as schools face the demand to improve academic achievement, which necessitates lesson improvement. Furthermore, as the issues related to schools become more complex and trust in teachers and schools wavers, attention is being increasingly drawn to the significance of lesson study that lies at the core of a teachers' learning community (i.e., a place where teachers increase each other's abilities, share and accumulate knowledge and create solidarity), not just from the standpoint of developing each individual teacher's ability but also to increase the school's organisational capacity (Kitagami, Kihara, & Sano, 2010).

However, in a situation where the PDCA cycle pervades educational settings, there is a concern that by being incorporated into the PDCA cycle as a measure to effectively attain improvements in classrooms and schools, the value of lesson study conducted as practical research for teachers may be lost. With the examination of teaching plans, there is concern that such plans may be trivialised as items are filled in accordance with standard teaching plans developed by each municipality. Meanwhile, it is also feared that the post-classroom conference will be reduced to tracing the forms of classroom reflections and improvement plan proposals in accordance with the PDCA cycle.

By the 1990s, Manabu Sato's lesson study paradigm shift theory had been put forward as a theory that could combat the movement of lesson study toward institutionalisation and loss of substance (Sato, 1997). While referencing the two opposing concepts of 'technical expert' and 'reflective practitioner' proposed by D. A. Schön, Sato indicated that the lesson study developed by university researchers from the 1960s onward pursued technical rationality and that lessons were reduced to fit the application range of theories that had been attained (i.e., didactics and science of lessons). As a result, this propelled the formalisation of educational practice and in-school training.

Sato's criticisms were not only addressed toward 'theory into practice' (the lesson study that targets logical application of scientific technologies developed in university laboratories, as practiced in a segment of educational technology research); rather, they were also directed at 'theory through practice' (the lesson study that aims to construct theories based on facts from practices by entering classrooms). Such practice was exercised by the Council for Nationwide Lesson Study and the Didactic Studies Association. Thereafter, Sato advocated lesson study as an activity for re-constructing 'theory in practice' through reflection by placing the teacher's practical research at the centre (Table 5.1).

At the time, the act of teachers 'teaching' was perceived negatively due to two factors that were taking place at the time: the proposal of a new view on academic achievement by the Ministry of Education and the introduction of the newest

Table 5.1 Two lesson study paradigms proposed by Manabu Sato

	Analysis of Classroom Activities Focusing on Technical Practices	Research of Classroom Activities Focusing on Reflective Practices
Goal	Develop and assess program General recognition that transcends context	Form practical epistemology based on educational experience Awareness specific to certain context
Objects	Diverse range of lessons	One specific lesson
Basis	Didactics, psychology, behavioral science, positivist philosophy	Social sciences/humanities, practical epistemology post-positivist philosophy
Method	Quantitative research, generalization sampling method, nomothetic method	Qualitative research, specification case study method, idiographic method
Characteristics	Elucidates cause and effect (causality)	Elucidates meaning of experience and its relation (connections)
Outcomes	Development of teaching techniques and materials	Reflective thinking and practical discernment
Expression	Paradigmatic mode of knowing	Narrative mode of knowing

Source: Chart created based on Sato and Inagaki, 1996, p. 121

psychology of learning to emerge since the cognitive revolution. Thus, it was also an era that was shifting toward emphasising active and collaborative lessons that respect children's 'learning'. Sato was at the helm of such a learning-centred approach under the keyword of the learning community. This is how the frameworks of technical experts and reflective practitioners were proposed in Japan by connecting them to the paradigm shift of lesson study, which transitioned from *teaching* to *learning*. Thus, a trend of emphasising ex post facto reflection (reflection-on-action) rather than prior design, and understanding the process of *learning*, rather than examining the act of *teaching*, during the ex post facto reflection was created. On the other hand, emphasising the act of teaching and designing lessons was deemed prone to promptly incite streamlining and inflexibility of educational practice and drill teaching (Figure 5.1).

Most schools' in-school training commonly exhibits a trend where a great deal of effort is expended in prior preparation, with the ex post facto conference becoming formularised or turning into a session of critiquing teaching skills. In contrast, the lesson study proposed by Sato and others places the manner in which children learned in the classroom at the centre of discussion, promoting the enhancement of the ex post facto conference by relativizing the complex events during the lesson. In addition, they set lesson study in the direction of preparing teachers' practical research from the sidelines. Such studies included research on the teachers' practical thoughts and learning process, development

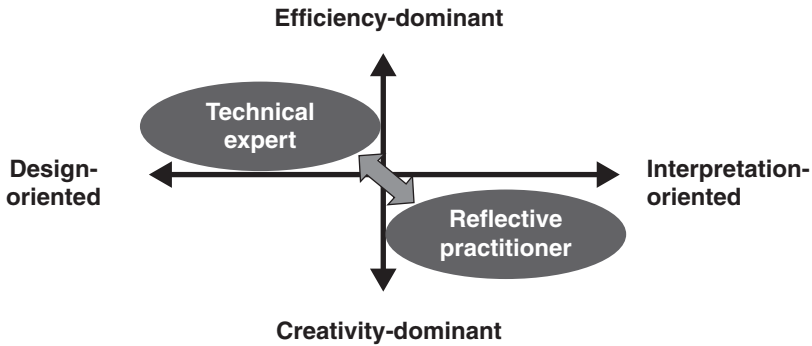


Figure 5.1 Dichotomous oppositional scheme of technical experts and reflective practitioners in Japan

Source: Created by the author

of classroom reflection tools, and the re-evaluation of narrative practical records (Asada, Ikuta, & Fujioka, 1998; Fujiwara, Endo, & Matsuzaki, 2006). Furthermore, it should be noted that when Japanese lesson study is discussed, particularly in Asian countries, child-focused lesson study as proposed by Sato or school reform concepts for the learning community are frequently referenced.

2-2 Re-examination of a dichotomous oppositional scheme of technical expert and reflective practitioner

As a clue for re-examining the dichotomous oppositional scheme between technical expert and reflective practitioner proposed by Sato, this section will highlight the existence of two patterns related to expertise and reflection, respectively (Ishii, 2013).

Expertise research in psychology (i.e., research on the process by which one becomes an expert in a certain field by attaining technical knowledge and skills) proposes the two opposing concepts of routine expert and adaptive expert (Hatano & Inagaki, 1983). A routine expert (efficient expert) refers to those who can apply procedural knowledge that has a pre-determined form ('if this . . . then do this') faster and more accurately. For example, although initially finding it difficult to cook according to a recipe, the learner eventually becomes skilled at cooking as they repeat the same procedure several times. The skills earned through this process are only effective for a specific task and under specific conditions. In contrast, an adaptive expert refers to a state in which one can flexibly re-combine procedural knowledge, expand it and discover new procedures in accordance with the situation.

In the 2005 report *Preparing Teachers for a Changing World* submitted by the U.S. National Academy of Education as a summary of findings related to the knowledge base that teachers should know as well as teachers' learning, such

adaptive experts who can make flexible use of the knowledge base to resolve uncertain problems are presented as an ideal image of the teacher that should be aspired to (Darling-Hammond & Bransford, 2005). Furthermore, a study on the knowledge base of teachers, Shulman (1987) points out the importance of the process of adapting knowledge related to the content of school subjects based on the context of educational practice, as well as that of pedagogical content knowledge (PCK), which is formed as a result of the process. The report by the National Academy of Education also emphasises this point. PCK can be said to function within the judgement process of teachers' design process and elucidate the essence of knowledge that bridges theory and practice.

Meanwhile, the dual concepts of single-loop learning and double-loop learning have been proposed for the reflective practice in organisational learning theory. In the 1970s, C. Argyris and Schön (1974) differentiated between the states of organisational learning as single-loop learning, which solves problems based on existing frameworks, and double-loop learning, which is a transformative activity that reconsiders even the appropriateness of the original problem settings (i.e., the existing framework and values). Argyris uses a thermostat as an analogy to illustrate the difference between the two learning states. If the temperature is too high or too low, a thermostat detects this and adjusts to the temperature that had been set; this is single-loop learning. On the other hand, double-loop learning involves reviewing the operating programme and basic policies themselves by also questioning whether or not the set temperature itself is suitable, as well as the precondition value of whether to prioritise comfort or energy conservation. In addition, the reflective practice, accompanied by the reframing of the framework proposed by Schön, presupposed double-loop learning.

Conclusion

As has been discussed up to this point, the framework of technical experts and reflective practitioners in Japan was proposed by linking to the transition of classroom practice from teaching to learning. As a result, a trend was born in which the reflective practice emphasised the *ex post facto* reflection rather than prior designing, with the *ex post facto* reflection unilaterally stressing understanding of the learning process, rather than examination of the act of teaching.

However, the *ex post facto* conference that performs reflection tends to focus only on describing and interpreting children's unique learning from beginning to end. It is also prone to lacking the viewpoint of examining children's learning in relation to the teacher's instruction and curriculum. In addition, it is rare for the conference to overcome superficial factual exchanges and extend to the deciphering of their significance and theoretical construction (i.e., the organisation of tacit knowledge into formal knowledge).

On the other hand, emphasising the technical process of lessons and the act of teaching was viewed as likely to invite streamlining and rigidity of drill teaching into educational practice. As a result, the technical expert model that provides

the foundations of the teacher training programme held by the Japanese government or municipalities remains unchallenged as to whether it has any propensity to reduce to solely learning how-to and skills, lacking an understanding of the contents that are to be taught. This becomes an underlying factor to generate practices that simply follow procedures without deliberating on their meaning.

As indicated in Figure 5.2, the emphasis on becoming technical experts does not immediately signify an emphasis on efficiency. On the other hand, it is necessary to conduct reflection as a problem-exploration cycle spanning up to knowledge creation that re-questions the original framework of problem-setting. Otherwise, it will lead to strengthening only the existing framework, causing rigidity of practices. Furthermore, the creative qualities of experts (i.e., the flexible ability to respond and judge per the situation) that the concept of the reflective practitioner tried to relativise is not something that necessarily opposes the act of designing practices, learning the theory constructed externally to practice and the course of learning that applies these to practice.

The dichotomous oppositional scheme of technical experts and reflective practitioners in Japan, as indicated in Figure 5.1, is prone to overlook the creative thought process developed intentionally for the design of practice before and during the practice. However, this is something that had already been considered in Schön's idea of 'reflection in action'; as such, there is no need to raise J.F. Herbar's educational tact concept.

In the current state where the Japanese dichotomous oppositional scheme of technical experts and reflective practitioners is operating to propel the formulation

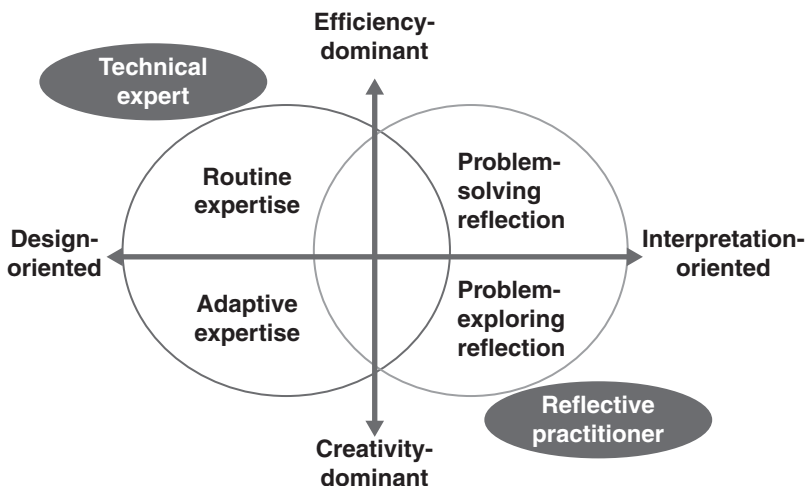


Figure 5.2 Re-construction of dichotomous oppositional scheme of technical expert and reflective practitioner

Source: Created by the author

of lesson studies, to re-evaluate the other lineage of Japanese lesson studies (i.e., design orientation and creativity-dominance) is becoming necessary (Ishii, 2014). This is particularly so in the present Japan, where there is an increasing number of young teachers who have issues with subject matter studies and teaching practice as a result of massive retirement and the new employment of teaching staff. The study of lessons that exist within the course of teaching and learning is not something that is resolved solely through researching teaching skills, or, conversely, only through research studies on children and learning. The realities of classes that include children's learning research need to be examined in relation to the teacher's intentional prompting (i.e., subjects, materials and methods to be taught). Furthermore, the teacher's internal judgement/consideration process before and during the classes, or, the world of meanings experienced between children, teaching material and teachers needs to be relativised. Thereafter, by focusing on lesson study that aims to create lessons that are not centred on either techniques or children but exist as art will enable contact with viewpoints that perceive classes as dramas and craftsmanship, which has refined lesson study in Japan.

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