“Lesson Study” as Professional Culture in Japanese Schools: An Historical Perspective on Elementary Classroom Practices

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This research examines “lesson study” as a traditional model of creating professional knowledge in schools. “Lesson study,” typically defined as teachers’ classroom based collaborative research, has a long history in Japan as a shared professional culture with potential for enhancing learning, enriching classroom activities and transforming the school environment. A case study method based on historical data is the primary approach used in this research. Detailed description and analysis of lessons are provided, individual lesson plans are examined and exchanges of views between teachers are discussed. The findings are intended to help clarify the cultural and historical role of lesson based research in Japanese schools, and also the significant influence that lesson study has exerted on developing a culture of shared professionalism in Japan.

Keywords: lesson study, elementary school, teaching, professional culture, Meiji era, Taishō era, Shōwa era, Japan

1. Introduction

The purpose of this research is to examine the historical background to teachers’ collaborative research on classroom activities known as “lesson study” (jugyō kenkyū 授業研究), and the process by which it came to be established at the elementary school level in Japan. Emphasis is here placed on an analysis of the environment and culture of support which generated lesson study within Japan’s school culture. School culture is here defined straightforwardly as “the commonly held beliefs of teachers, pupils, and principals” (Stolp 1994, p. 2). Beliefs are of particular significance since they represent basic assumptions, modes of thinking, values, rituals, heroes, and symbols (Hofstede 2001, Senge 1990). A review of the research literature on school
culture reveals an understanding that parents, teachers, principals and pupils all work within a cultural context that influences every aspect of their educational activities (Prosser 1999; Hinde 2004; Takahata 2004). This paper thus refers to school culture, as defined above, especially in terms of organization (Hofstede 2001). Following Bruner (1996) who notes that “culture has always been in the process of change” (p. 97), the present authors regard school culture as malleable, forever accommodating possibilities for leadership inspired change. Our discussion of lesson study as professional culture within Japanese schools also draws on Schein's dynamic view of organizational culture, with its theoretical perspective on how cultures begin and how they develop. Schein (1985) reveals the “underlying interpersonal and emotional processes that help to explain what we mean when we say a number of people share a common view of a problem and develop a shared solution.” For Schein, moreover, “all definitions of culture involve the concept of shared solutions, shared understanding, and consensus” (p. 149).

The phenomenon known as lesson study evolved through precisely such a sharing of responsibility, and a collaborative process of preparing lesson plans, conducting and observing lessons, checking and evaluating teaching, reflecting on practice, and replanning (Sarkar Arani, Shibata and Matoba 2007). Teachers first created lesson plans in response to learning requirements, and they established their classroom objectives in the actual process of classroom teaching. Subsequently, methods for evaluating lesson objectives were devised. All of this was managed entirely by the teachers themselves. School committees were established for collaborative lesson study, and they were typically divided into their various functions of lesson planning, lesson implementation and classroom observation, and sessions for evaluation and reflection. In preliminary research meetings, careful consideration was given to understanding the circumstances of pupils. There would also typically be an examination of the development of the lesson, based on whether or not the questions, printed documents distributed, and instructions given by teachers were appropriate, and whether pupils had developed motivation for study. Teachers observed actual classroom conditions, and they later conducted critique or “reflection sessions” (hanseikai 反省会).

Inherent to lesson study were the training sessions conducted for lesson plan review, for classroom observation documents, and for lesson reflection and evaluation. A unique environment developed in which fellow teachers visited and observed each other in the classroom, and pupils engaged in study in the uncommon atmosphere of being observed. Since classroom visits occurred on a regular basis from 1872 as part of teacher training for novice teachers, pupils quickly became accustomed to studying in this open setting. Visiting teachers examined the responses and behaviour of pupils to determine the degree of their interest in the class, and the suitability of the questions asked and of the texts used. The reflective nature of lesson study had as its premise collaboration between participants, and throughout the process emphasis was placed on how pupils viewed and comprehended the subject matter being taught. The methodology inherent in conducting lesson study further led to the need for effective documentation of classroom observations. Lesson study was thus inherently a collaborative undertaking which Senge has identified as “involving everyone in the system in expressing their aspirations, building their awareness, and developing their capabilities together” (Senge et al. 2000, p.5). It is, of course, of interest to consider how lesson study might be effectively transposed into other educational cultures, but of more immediate concern to the present paper is an exploration of how Japanese lesson study developed into an intrinsic part of Japanese educational culture in general, and of the culture of individual schools in particular. This paper's
focus is on the operation of lesson study as it developed within Japanese public schools from Meiji through Taishō to Shōwa, and it deploys to this end historical evidence and documents created by school-based research groups.

2. Lesson Study in the Meiji Era

Modern Japan’s education system began with the promulgation of the Fundamental Code of Education (Gakusei 学制) of 1872, which laid the foundations for new schools, new perspectives on education, including teaching methods and the professional development and training of teachers. The Ministry of Education (Monbushō 文部省) sought to establish a unified system of school and teacher training throughout Japan (Tōkyō Bunrika Daigaku and Tōkyō Kōtō Shihan Gakkō 1932). According to Lincicome’s research on educational reform in Meiji Japan, “the government founded the first normal schools, recruited their first pupils, hired their first faculties, and translated the first teaching manuals to train them in the new “science” of education” (Lincicome 1995, p. 233). Certainly, prior to Meiji, there were numerous other “schools” in existence, such as the local schools or (terakoya 寺子屋) which Western scholars translate as “temple schools” (Marshall 1994; Lincicome 1995). Learning also took place within private schools, and in schools established by feudal domains, but these schools did not have an impact on education across Japan. As a result of education reforms implemented shortly after the Meiji restoration of 1868, Japanese elementary school education became oriented toward European and American models, with their spirit of improving education for the common people in an age of modernity. In the process of transferring Western technical “know-how,” the Meiji government deemed it necessary to encourage educational goals that were conducive to building a modern Japan.

Early Meiji educational methodology was concerned above all with the process of teaching lessons in the classroom. The teacher stands up straight in front of the wall map or blackboard, with pupils seated in an orderly fashion before him. Pupils respond to instructions and questions that are repeatedly posed by teachers. Western, particularly American, textbooks were translated for use in the classroom, and classes were conducted in a uniform manner regardless of the subjects being taught. Such a methodology was rooted in Western educational thought and practice, and while there were clearly insufficient numbers of teachers capable of teaching with modern educational methods, the ideal remained of implementation within all elementary schools in Japan. The aforementioned Fundamental Code of Education set out to establish facilities for the cultivation of teachers. Accordingly, in January of 1873, the Japanese government founded an elementary school, the so-called Tōkyō Shihan Gakkō Fuzoku Shōgakkō (東京師範学校附属小学校 Elementary School attached to Tokyo Normal School), and in April of the same year, 78 pupils began classes there. The elementary school was founded for the purpose of providing a practical learning environment for teachers and pupils of Tokyo Normal School where they could observe classrooms, conduct experiments using new methods, and provide training for teachers in classroom management (Tōkyō Bunrika Daigaku and Tōkyō Kōtō Shihan Gakkō 1932).

The graduates of Tokyo Normal School during the first decade of Meiji era did not become elementary school teachers, but were invited by prefectural governments to accept positions as teacher trainers. Tokyo Normal School thus served as a training institution for elementary school teachers in rural areas, and its role later changed in 1902 when it became the Tokyo Secondary School Teachers College (ibid). In August of 1873, Normal Schools were
also established in Osaka and Sendai, and in 1874 government-operated normal schools were set up in Aichi, Hiroshima, Nagasaki, and Niigata prefectures. These institutions attempted to inform their teacher training with educational methods found in Western countries, and it was natural for teachers to engage in collaborative learning about curriculum and instruction. The graduates of these Normal Schools disseminated their newly acquired knowledge of Western teaching methods at their schools of employment, and were expanding further upon their experiences in the classroom.

Teachers set up regional learning groups (chiiki no gakushū shūdan 地域の学習集団) which were designed to facilitate the sharing of experiences about learning, teaching, designing effective lesson plans, and managing the classroom and school administration. These groups also concerned themselves with teachers’ working rights (Inagaki 1966). Regional learning groups flourished, and had a significant impact on teachers’ professional development in the first decades of the Meiji period, when most schools could employ only one or two teachers. In 1877, out of a total number of 19,345 schools, 8,332 (43 percent) employed one teacher, 4,766 schools (25 percent) had two teachers, and only 84 schools reportedly had ten teachers. Moreover, 6,170 schools were equipped with only a single classroom. By 1881, the total number of schools declined to 17,889, but over half of them employed at least two teachers (Inagaki 1966, p. 37).

Teachers in early Meiji elementary schools revealed a deep interest in curriculum and instructional methods. There was notable participation in regional autonomous learning groups during the period of the popular rights movement (jiyū minken undō 自由民権運動) from 1878 to 1888. The activities of educational organizations at this time, which saw teachers form autonomous study groups, have been mentioned in previous literature on the subject (Katagiri 1990). In the 1880s, teachers’ research on classroom instruction concentrated on the five steps of teaching structure based on the educational philosophy of Johann Friedrich Herbart: namely, preparation, presentation, comparison, integration, and application (Robinson 1977; Inagaki 1993). Miller (2003) explains the significance of the Herbartian approach as follows: “Using this structure a teacher prepared a topic of interest to the children, presented that topic, and questioned them inductively, so that they reached new knowledge based on what they had already known, looked back, and deductively summed up the lesson's achievements, then related these to moral precepts for daily living” (p. 114). Subsequently Japanese teachers published research that drew on Herbart’s method, which proved to be the favoured method of teacher training in Meiji Japan. The work of Higuchi Kanjirō 樋口勘次郎, who led the movement toward more pupil-centered teaching practices, is representative (Higuchi 1905).

During Meiji, the frequent importation of Western educational thought and systems led to the establishment of a new educational discourse, in which “teachers, as professionals, were trained to assume the dual roles of both “scientist” (empirical, logical, critical, and analytical) and “artist” (creative, adaptive, and flexible)” (Lincicome 1995, p.234). New critical approaches to Herbart duly emerged among educators in the early 20th century (Hisaki, 1980). This critical discourse resulted in teachers shifting their focus from teaching to learners’ needs, activities, individuality, and learning strategies (Lincicome 1995; Nakano 1968). In spite of these new developments, classroom circumstances, in which teachers directly advised and taught many levels of pupils, remained fraught with difficulty. There were insufficient numbers of qualified teachers, and it was often the case at schools with mixed levels that an individual teacher was required to accommodate pupils of multiple ages and abilities in the same classroom. However,
A breakthrough happened around the turn of the twentieth century that alleviated these difficult conditions. This was the popularization of teaching methods that catered to pupils of different levels within the same classroom.

Research by Katagiri (1990) has indicated that during the 1880s, the regional learning groups, which had been established throughout Japan, gave teachers the opportunity to begin “lesson study groups” (jugyō kenkyūkai 授業研究会). The main purpose of these latter groups was to share the experiences of teachers who conducted lesson study in their classrooms. Elementary schools attached to teacher training colleges began to undertake empirical studies to overcome problems within the school classroom, and lesson study groups were formed at numerous elementary schools. These gatherings for the exchange of knowledge were enthusiastically hosted by the growing community of alumni at the teacher training colleges. Furthermore, the reports of alumni meetings, for example, contained detailed records of classroom teaching practices. The existence of lesson study groups at elementary schools attached to teacher training colleges had become common by the late Meiji era, while the numbers of participating elementary school teachers grew. This motivation to study new teaching methods encouraged teachers to accept more responsibility for teaching and learning. This kind of teacher learning community was supported and expanded by the Normal Schools Alumni Association (Shihan Gakkō Gakuyūkai 師範学校学友会). That lesson study groups now began to exert a substantial impact on the improvement of teaching practice, and subsequently helped to influence the expansion of lesson study in schools. The background for cooperative lesson plans at elementary schools had developed within three main social contexts of the Meiji era. First, in various regions of Japan there was a contextual basis for teachers to learn a new teaching method provided by the new Meiji educational discourse. Second, there already existed in Meiji Japan teacher training colleges intended to cultivate professional skills, while the affiliated elementary schools served as a laboratory for conducting practical research. Teachers were thus able to conduct research based on practical classroom issues and timely educational topics, and to convey these research perspectives to their counterparts in regional areas. Third, there existed “Alumni” Practical Research Reports (jissen hōkoku 実践報告) for college graduates.

In the late 1870s and early 1880s, the Ministry of Education challenged local school administrators to apply a more creative and flexible approach through effective teacher training. Lincicome states that “in practice, however, the Ministry's tightly knit web of laws demanded just the opposite: strict allegiance to the center” (Lincicome 1995, p. 234). Indeed, the government relied on the Ministry to revise curriculum guidelines, and to inspect and authorize textbooks, activities which certainly exerted a profound influence on the content and transmission of school-based knowledge. In this context, local administrators and teachers were persuaded to accept the political and ideological values of the Meiji government as a framework for the modernization of Japan (ibid). According to Horio, teachers were expected to function in their dealings with children and their parents as agents acting under “the emperor's supervision” (tennō no kanri 天皇の管理) (Horio 1988, p. 254).

Nevertheless, the apparent contradictions between ideals held by teachers and the dictates of national government policy led educators in the 1880s to promote an educational discourse that emphasized pedagogical knowledge and teaching methods (Marshall 1994; Abosch 1964). Educational progress during the Meiji period thus came to support principals' and teachers' critical reflection on both theory and practice for the improvement of lessons and of the teaching training system. Individual educators, such as Marion McCarrell Scott (1843–1922),
introduced Western educational practice into Tokyo Normal School (Sato 1998), and then promoted a pedagogical discourse that focused on effective teaching methods during the Taishō era (1912–1926) (Collins 1975). Such developments “helped to fuel the so-called new education (shinkyōiku 新教育) or liberal education (jiyū kyōiku 自由教育) movement” based on the philosophies of Johann Heinrich Pestalozzi (1746–1827), Jean-Jacques Rousseau (1712–1778), Friedrich Wilhelm August Fröbel (1782–1852) and Herbert Spencer (1820–1903) (Lincicome 1995, p. 240). Teachers subsequently acquired the opportunity to do lesson study in small groups and to link educational concepts such as learning from practice (jissen kara manabu 実践から学ぶ) and reflection on teaching (hansei 反省), with new Western ideas such as pupil centered education, flexible educational administration, individuality, citizenship, anti-bureaucratic activity, and the application of practical teaching and training methods (Hisaki 1980; Ebihara 1975). The stage was thus set for teachers to expand their autonomy in terms of professional development which, although at times conflicting with state authority, allowed for the eventual sustainability of lesson study in schools across Japan from the Taishō era.

3. Lesson Study in the Taishō Era

Japanese scholars have noted that during the prewar period when school curricula had become increasingly rigid and nationalistic, teachers still created opportunities for research on teaching in practice, and engaged in collaborative inquiry on classroom activities in order to improve teaching. For example, Toyoda (2005) has detailed how during the Taishō era Japanese teachers created a child centered curriculum, and independent learning activities. He suggests, moreover, that teachers at Mikuni 三国 Elementary School in Taishō Japan, had the freedom to “choose subjects of study, devise learning methods, develop learning materials and collect pupil data” (Toyoda 2005, p. 86).

Iwasaki’s investigation of the lesson study process in elementary school science education in Taishō found that teachers’ discussion meetings were particularly effective in enhancing teaching by paying more attention to pupils, and by encouraging the search for better designed teaching and learning materials (Iwasaki 2001). Iwasaki has analyzed records of teachers’ meetings on science lesson plans held at Toyohira (豊平) Elementary School in Sapporo in 1920, and he reports how teachers discussed ways of emphasizing cooperation and mutual interaction between teachers and pupils. Fukaya’s (2007) research on an elementary school attached to the Kagoshima (鹿児島) Normal School demonstrates that teachers in early Taishō were collaborating to encourage discussion and reflection on teaching. According to Sugiyama (2004), “[Japanese] school curriculum had been nationally determined for a long period, during which time there had been instructor manuals for teaching the national curriculum. It was therefore required that teachers adhere to these manuals; lesson study in practice was only geared toward technical aspects of teaching” (p. 352). Toyoda (2009) also notes that while lesson study was strictly bound by nationally determined curricular content, teachers made innovations on an individual level. For instance, in the Taishō era, Miyoshi Tokue 三好得恵, a principal of Mikuni Elementary School, cultivated teachers’ capacity to exercise leadership by promoting collaborative activities. Moreover, Miyoshi founded an association to raise funds for holding open classes and for publishing books on teaching.

The origin of the Taishō model of lesson study, which emphasizes critical feedback on lessons, assessment of lesson plans, and reflective practice, can be found in the teaching methods of Ashida Enosuke 芦田恵之助 (1873–1951), a teacher at the elementary school
attached to the Tokyo Higher Normal School from 1899 to 1917. His area of expertise was teaching Japanese language (kokugo 国語) (Kobayashi 1989). The lesson records (jugyō kiroku 授業記録) of Ashida and other teachers who learned from him are contained in Dōshi dōgyō 同志同行, a monthly journal of research on teaching.1 These lesson records of teachers were entitled Kyōdan kiroku 教壇記録, and consisted of the shorthand writings of Aoyama Hiroshi 青山廣志, a correspondent for the Osaka Mainichi Shinbun 大阪毎日新聞 (Osaka Mainichi Newspaper). These writings offer a description of the evolution of Ashida’s classroom practice.

Ashida outlined his teaching methods for reading Japanese in the “Ashida Method of Seven Steps” (Ashida shiki shichi henge 芦田式七変化), and embarked on a mission to disseminate his philosophy of teaching throughout Japan.2 The Dōshi dōgyō was read by teachers who wanted to learn Ashida’s methods, and had a large impact on Japanese elementary schools in the 1930s. Through their review of Ashida’s lesson records, teachers were able to learn from his reading methods, and integrate them into their own practices. Ashida emphasized the power of lesson records and lesson analysis (jugyō bunseki 授業分析). His methods represented a departure from the Herbartian and other teaching structures in their emphasis on more meticulous classroom interaction, and greater respect for children’s learning and communication needs (Ashida 1936a). The Herbartian teaching method was prone to formality, and had proved difficult to apply to teaching in an actual classroom. Moreover, its strict adherence to the completion of all five stages was not well suited to lessons which accommodated pupils of diverse abilities. These points of criticism, informed by an active approach to learning, were first made by Higuchi Kanjirō (Higuchi 1905). Ashida was well known as a fervent supporter of Higuchi, and he too cautioned against a teaching approach that was too regimented. As the lesson records published in Dōshi dōgyō make clear, Ashida maintained charts of pupil seating (zaseki hyō 座席表) and teachers’ blackboard writings, and he wrote down the exchange of questions and answers that transpired between teachers and pupils. Teachers’ reflection upon classroom activity based on question and answer sessions with pupils was accomplished by direct observation of the classroom, and group discussion. Furthermore, mimeograph machines, which by now had become widely used in educational settings, made the dissemination of ideas possible throughout Japan. These machines allowed the easy distribution of lesson plans, lesson records and reflective comments among teachers. As a result, active lesson study was able to develop and become more widespread at schools.

School principals were often active in supporting teachers’ autonomy in their practice of lesson study (Toyoda 2009). Nevertheless, principals and local education authorities did not readily welcome learning and teaching innovations that challenged traditional methods of school management as dictated by the Ministry of Education (Ebihara 1975). Hence, Taishō teachers in general did not have the individual authority to reform teaching content and school curriculum in order to render it more responsive to pupils’ needs (Lincicome 1995; Inagaki 1993; Ebihara 1975).

4. Kijō 亀城 Elementary School in Early Shōwa Japan

With the proliferation of mimeograph machines, preparing lesson plans based on curriculum guidelines, followed by critical review sessions, became the central work of lesson study committees. Teachers at elementary schools used the mimeograph to print out lesson plans that reflected their educational views, distributed them to fellow teachers, and attended open classes and critical review sessions for evaluation and reflection.3
Written records of teaching plans between the years 1932 to 1934 were maintained at Kijō Elementary School (KES) located in Kariya 割谷 city, Aichi Prefecture. 4 A geography lesson study plan comprising seven lessons for 5th year pupils is analyzed here, and a description of the seven lessons may be viewed in Appendix A. This record of seven lessons is part of a unit lesson study plan created by Isomura Akira 磯村章, and it took place on September 20, 1930. Isomura describes here in detail the objectives of the lesson, and designs an outline of observations and professional dialogue on his teaching for the discussion session to be held afterwards. His lesson plan resembles a checklist: it contains seven items for teaching, and eighteen items for teacher and pupil activities in the teaching and learning process. These were to be used for both self-evaluation and reflection on the lesson, as well as for colleagues’ discussion of methods for geography teaching.

Isomura carried out two surveys of pupils, and made an analysis of his findings. The questionnaires inquired about children’s motivation toward the learning of geography. A preliminary investigation was conducted in early May (Appendix B); it was followed by another in late September (Appendix C). Isomura’s observations suggest his ability to reflect deeply on his practice: “I wondered what children, who are as pure as blank sheets of paper, thought about the learning of geography, and so I listened carefully to their honest opinions. There were twenty five comments from twenty two children about why they liked learning geography, while forty children gave fifty three reasons for their dislike of geography” (Appendix B).

The basic intention behind Isomura’s lesson study was to “facilitate pupils’ learning about mountains in central Japan, and to cultivate their interest in mountains,” but he also emphasized raising their general interest in geography. To this end, his lesson plan also state what approach in geography was most appropriate for understanding the feelings and cultivating the interest of youngsters. For Isomura, lesson planning was the way to improve practice. He noted:

I must admit that I am to blame for many pupils’ responses [about learning geography]. When learning geography for the first time, pupils are expected to memorize a large amount of information. I ignored the obvious fact that learning the geography of one’s region requires an enormous amount of effort. In light of this, I thought I would like to start anew and try to teach geography that was interesting and fun (Appendix C).

The results of Isomura’s research on classroom practice can be verified by means of the two afore mentioned questionnaires. The children’s responses leave no doubt that the lesson plan attracted their attention, and encouraged them to focus and engage themselves in the classroom activity. Isomura’s change of approach toward the teaching of geography resulted in verifiable differences in children’s perception of the classroom atmosphere and the study of geography (Appendix B). His second survey saw the number of positive pupils’ comments rise from twenty five to eighty, while reasons given for their dislike of learning geography declined from fifty three to thirty seven. It is also meaningful to examine how pupils wrote their comments (Appendix C). In the first survey, pupils only wrote very brief comments, but in the second most wrote full sentences to explain their enthusiasm for geography. For example, one pupil wrote, “I really like geography. It is because 1) I can find out many things by looking at a map; 2) I love learning about many towns and cities; 3) I can easily understand the teacher’s questions, and have an interesting discussion for an hour; 4) It’s interesting to learn how the topography of the land has developed” (Appendix C). It must be underscored that Isomura repeatedly reflected upon his own classroom practice, and was concerned that his teaching may not have been completely understood by his pupils (Appendix C). He noted:
...children thought it was interesting and fun to start the lesson by looking at the postcards and illustrations that they had brought to class. I was glad to observe that children were happy with the way I resolved the previous problems, and it became my usual teaching practice to conduct lessons while working in tandem with them. This was a warning for me to change my teaching style (Appendix D).

Isomura's comments suggest the potential for Japanese teachers to collaborate regularly and learn from colleagues, and reflect individually on the realities of pupils' learning. His records of lesson study process are, however, not the only ones in existence for KES. For 1930 to 1933, there exist mimeograph records of other lesson plans, participant observation notes and teachers' notes of discussion and evaluation sessions. The appendices of this paper contain just a few of the many existing records relating to lesson study process at KES. Other evidence of the lesson study process in practice exists in the form of the discussion and evaluation sessions of 4th and 6th grade science education lessons in 1930 (Appendices E and F). In particular, we may observe from the teachers' notes included in Appendix E, the specificity with which they recorded their reflections and observations on teaching science to pupils. Consider for example the following notes: “whether questions posed to pupils are refutable”, “the degree of pupil-centered teaching,” “how to respond to pupils' questions.” Appendix F provides detail of teachers’ discussion and critique sessions, and includes these comments by a 6th grade class teacher (Sugiura Ito 杉浦いと): “The lesson should begin with a discussion of something made from vinegar that is related to life,” “the pupils' experiments are mechanical” and “make sure that the results from the experiment are duly written down in the record book.”

There was also some debate in the review and evaluation sessions over whether the class was clearly focused on pupils' learning activities, whether teaching was directed at pupils' understanding, and whether the teacher adopted a sufficiently reflective attitude toward his lesson plan. From these excerpts, it would seem that many KES teachers emphasized pupil-centered teaching, and were striving to function as “managers of learning,” in addition to their roles as didactic instructors in the building of a learning community culture in schools of early Shōwa Japan.  

5. Discussion

KEs records of geography and science classroom lesson study shed light on lesson study as it was implemented in one public school at the start of the 1930s. Lesson study, teachers' professional development, and the use of new teaching methods were not only prevalent in the affiliated schools of teacher education colleges, but were also actively incorporated into regional public schools (Nakauchi 1970; Miyoshi 1972). This owes much to the fact that Japan had a very high rate of primary school enrollment, even compared with more developed nations. Indeed, as early as the year 1907, 98.5 percent of boys and 96 percent of girls went to school (Kaigo and Naka 1963, p. 90). Moreover, in the 1930s when lesson study became more prevalent, the rate of secondary enrollment was also relatively high, with 21 percent of boys and 15.5 percent of girls attending (Murata et al. 1996, p. 85).

During the early 20th century, many educational journals focused on teaching methods. Kyōiku kenkyū (教育研究 Educational Research) was published in 1904 by the elementary school attached to the Tokyo Higher Normal School, and it became a prominent educational journal contributing to the practice of lesson study (Koizumi 1904). Additionally, numerous other journals on lesson study also contributed to its dissemination. These included Kyōiku
Figure 1: Students’ studying at Honami Elementary School (1909)

Figure 2: Moral Education Class at Kijō Elementary School (1910)
(Source: Kijō Elementary School Archive, used with permission).
jikkenkai 教育実験界 (The Society for Experimental Education), and Kyōiku gakujutsukai 教育学術界 (The Society for Science of Education) which were founded in 1898 and 1899, respectively (Ōmura 1898; Inoue 1899). It would appear, therefore, that lesson study came to constitute an essential aspect of school culture and teachers’ professional development by the late Taishō and early Shōwa eras, and the educational journals served to deepen mutual exchanges between schools throughout Japan. Certainly, the culture of lesson study was formed through classroom instruction of teachers at schools across Japan. School teachers taught lessons based on their individual views of education, and they openly shared their views on educational improvement both inside their schools and with society at large. At the start of the 20th century, teachers were also using photography to record classroom activities and learning environments, and were making these images and words public by means of educational journals (Kinkōdō Henshūbu 1910; Yoshida 1921; Ebihara 1975; Toyoda 2005; Fukaya 2007). Photography was used for more empirical evaluation of lessons and teaching. Figure 1 depicts pupils’ independent learning environment in a class at Honami Shōgakkō 穂波小学校 (Honami Elementary School). This photo was used as instructional material for pupils in the teacher training and education course at Fukuoka ken Fukuoka Shihan Gakkō 福岡県福岡師範学校 (Fukuoka Prefectural Normal School) in 1909. In the photo we can observe the quiet and attentive of pupils after the whistle has blown marking the start of study time.

The question that naturally arises is why teachers thought it necessary to photograph the classroom learning activities of pupils. Figure 2 is a photograph of the school principal, Kuroda Sadae 黒田定衛, teaching pupils a lesson in moral education using the story of Matsumoto Keidō 松本奎堂. Matsumoto was a samurai 侍, well-known in the city of Kariya for his driving ambition, and his philosophy of school discipline which included the principles of “improvement, perseverance, and cooperation”. In the photos, Principal Kuroda stands directly in front of the class; the backs of pupils are visible and convey the tense classroom atmosphere typical of the study of moral education. The atmosphere of the moral education class depicted in Figure 1 appears to be contemplative and collaborative, and is quite different from the rigid atmosphere depicted in Figure 2. The teacher in Figure 1 can be seen wandering among pupils, checking their work and giving individual assistance. However, in Figure 2, the teacher delivers a traditional didactic lesson from the front of the classroom with pupils sitting straight to attention. The contrasting pedagogical styles of the teachers can be clearly discerned in these two photographs. During the Meiji and Taishō eras, it was common for school principals to assume responsibility for teaching moral education (shūshin 修身). This explains much of the difference found between approaches to teaching morals and other subjects. Principals tended to give formal lectures in moral education, which covered such topics as school culture, goals, life skills and ethics in society. In the Shōwa era, however, the National School Law (Kokumin Gakkō Rei 国民学校令) of 1941 dictated that responsibility for moral education should be transferred from principals to home room teachers (Motokane 1996; Hayashi 1997; Monbushō 1981). It should be duly noted that both photographs were taken 1909–1910, and the suggestion is that by this time there already existed diverse views of teaching. It is commonly viewed that Meiji era education, particularly from 1890, was based on instilling the values of loyalty, patriotism, and respect for the emperor (Yoshida 1921). Nevertheless, the impression given by Figure 1 is that pupil-centered learning in classroom activities had already begun to develop at regional public elementary schools.

A school organization comprises teachers, administrators, and pupils themselves, and
the formation of school culture is a direct outcome of the actions taken by these different stakeholders. Teachers' lesson study served to create the educational culture in Japan over the course of one hundred years. Elementary school teachers' cooperative engagement in lesson study remains to this day a remarkable feature of elementary and junior high school teaching in Japan. It points to a school culture that encourages mutual observation and the exchange of pedagogical views; it is one in which teaching and learning take place through voluntary activity that enhances the professional competence of school teachers. What was the role, then, that lesson study played in the formation of professional development at schools? In elementary and junior high schools, this practice led to an increased motivation for learning. Indeed, lesson study committees were recognized by the teaching staff as vital spaces for the educational development of children, and played an important role in supporting the essential function of school education. As seen in the case of KES, a variety of lesson study activities had already taken root in regions of Japan by 1930. Furthermore, lesson study encouraged teachers, through their observations of pupils' learning activities, to reflect upon their own teaching practices, and so accumulate teaching experience. Lesson study continuously urged teachers to examine their own professionalism and create goals that help maintain positive motivation. This revitalization function generated new teaching practices.

Finally, lesson study emphasized collaborative research on classroom activities, and enhanced the possibilities for teachers to reflect upon their own practice from multiple perspectives. This yielded benefits for the entire school in terms of pupil comprehension and the sustainability of quality teaching. Yet, it must acknowledged that the uncritical adoption of lesson study did not necessarily result in more reflective teacher practice, or even teachers' collaborative learning. What seems absolutely necessary was for teachers to have a significant degree of common understanding of educational practice as a source of reflection on the teaching and learning process.

School based in-service training focusing on lesson study promoted professional competence and the enhancement of teaching skills. Lesson study enabled educators to observe the progress of pupils while improving their teaching skills. In other words, teachers became more aware of the diversity in their pupils, and more inclined to think in terms of lesson planning oriented to pupils' learning activities rather than teacher focused pedagogy. Improvements in teaching transpired naturally through regular lesson study. Such conditions allowed for the democratization of school management, as well as for the possibility of teachers making new discoveries in the classroom. One consequence of lesson study was to negate the notion that a uniform style of teaching was effective. Pupils' inability to understand a lesson did not mean that the fault was in the pupils' ability or motivation. Rather, it provided teachers with the opportunity to reflect upon their own teaching, and encouraged in the entire school teaching staff an attitude of contemplative effort in striving for successful learning by all pupils.

The careful collaborative examination by teachers of lessons helped generate an awareness of their need to assume more responsibility in terms of school level management. Furthermore, if lesson study enhanced teachers' perceptions of pupils' circumstances in the classroom, by the same token it improved their professional skills. Teachers who admitted to each other that their teaching was not effective, who empathized with fellow teachers, and who discovered that they had something in common, had the opportunity to set new goals for themselves and for their future lessons.
6. Conclusion and Lesson Study Prospects

Lesson study as a professional culture in Japanese education has a long history. During the Meiji era, it was necessary that Japan absorb and learn from the educational methods of the West in order to create a modern educational system better suited to the needs of the modern state. The seeds for the future development of lesson study were planted during this important period. In particular, Meiji lesson study was conducted collaboratively at schools affiliated to teacher education colleges, spaces for learning that supported the education of teachers. This teaching culture subsequently spread to public schools all over the country. In the early 20th century, a typical Meiji era school environment emerged which provided spaces for teachers to discuss the effectiveness of their teaching methods (Kinkōdō Henshūbu 1910). In addition, the proliferation of mimeographs facilitated collaborative lesson plans. Copying and sharing of lesson plans allowed their dissemination to other schools. The proliferation of this new technology helped contribute to open discussion about teaching. Lesson study also enabled Japanese teachers to realize, reflect upon, and sustain meaning in their classroom environment, and in pupil learning activities. This pedagogical awareness transpired as a result of the accumulation of formal lesson study, but it also arose out of the informal reflection of individual teachers. The way of viewing pupils as described in Isomura’s geography lesson plans, for example, was achieved through continuous reflection on teaching.

This study asserts that the Japanese model of lesson study supported schools in managing micro-level educational reform in practice, bringing teachers together to learn from each other and to develop the school’s capacity for promoting learning and fostering shared values. Of course, the school professional culture of lesson study in Japan was not achieved overnight. It constitutes one example of the Japanese practice of kaizen (continuous improvement) which is relatively easy to comprehend yet difficult to master in practice, and requires time and systematic support from inside and outside the school. A professional school culture was formed through cumulative lesson study activities of teachers, who reflected on the realities of their pupils for over a century. The culture of lesson study was cultivated within this learning community.

Arguably, the most remarkable impact of lesson study historically has been its contribution toward the creation of a shared professional culture dedicated to educational improvement, the enhancement of pupil learning, enrichment of classroom practices, and acquisition of pedagogical knowledge (Sarkar Arani, Shibata and Matoba 2007; Takahashi and Yoshida 2004). Looking to the future, lesson study may help to support school leadership by building a culture of collaboration, and instilling a shared commitment among teachers to focus more on learning than teaching, and also a shared sense of the meaning of effective teaching. This may be accomplished through the use of a common language for sharing ideas, in the search for a common mission, common values and a common vision (Peterson and Deal 1998; O’Neil 1995). Since Stigler and Hiebert published *The Teaching Gap* in 1999, describing the Japanese approach to lesson study, teachers and educational researchers worldwide have reacted positively to this practice, and this has resulted in an increase in research utilizing ethnography as a qualitative method to examine school culture and teacher culture (Fernandez, Cannon and Chokshi 2003; Lewis, Perry and Murata 2006; Lee 2008).

Recently, educators in many countries have begun to learn from their Japanese counterparts how to develop a new culture for promoting learning communities at their schools (Sarkar Arani and Fukaya 2009). Needless to say, countries such as the United States, China, Indonesia,
Singapore, Iran, and Germany in their attempt to transfer the Japanese model have developed their own perspectives on lesson study based on indigenous school cultures, educational context and needs. In the teaching cultures of many countries, opening up classrooms to the outside and soliciting criticism are often interpreted uniquely as a means of teacher evaluation, and there is a tendency for teachers to have conflicting feelings regarding engaging in lesson study (Matoba, Shibata and Sarkar Arani 2007). Moreover, since the practice of lesson study is typically done simultaneously with large numbers of pupils, it is often difficult to determine how effective it is for all pupils, or how pupils may perceive the instruction. Many strategies are necessary for transferring lesson study to other educational contexts. Collaborative lesson plans, participant observation, and reflective thinking on teaching are the three points that serve as the core of lesson study, and should be highlighted in its application to other educational contexts. It is essential that teachers work together to plan lessons and to give feedback with no one individual teacher functioning as the sole leader in lesson study. Educators, as equal participants, must clarify their own views toward education and pupil learning; they must present a collaborative lesson plan based on these aspects, and articulate their fundamental approaches to teaching.

The final consideration is that lesson study should be understood as both regular practice and as process, and that problems will not be resolved after a single session. Effective lesson study follows the teaching of pupils and their progress over a long period of time. This kind of long term and continuous research orientation situates lesson study at the heart of school culture.

Acknowledgement

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APPENDICES

Appendix A: Unit Lesson Plan of 5th Grade Geography Classroom Lessons for Lesson Study at Kijō Elementary School (September 1930)
Instructor: Isomura Akira 磯村章
Date: September 20, 1930 (Sat.) 5th Period (the 2nd of 7 lessons)
Document: Regular elementary school textbook Unit 1 central Japan, Page 2 topography and climate
Purpose: Give an overview of the mountains in central Japan, and cultivate interest in mountains
Preparation: Maps of Japan and central Japan, examples, picture postcards, mountain climbing maps
Distribution (lessons overview)
1st period District Features and Topography 1
2nd period Mountain information
3rd period Rivers, land, seashore, climate
4th period Industry 1
5th period Industrial transportation
6th period Cities and towns
7th period Summary

Teaching and Learning Process
1. Practice map reading using maps of central Japan
2. Comparative review of already covered document
3. The relationship with local regions
4. Mountains and mountain ranges; how the shapes of the mountains were formed in the Pacific coastal areas, central Alps, and the Japan Sea area.
5. Relationship between mountains and life
6. Explanation of pictures
7. Explanation of geographical terms for comprehension of text (How to take organized notes)

My Plan for the Learning of Geography
1. Teaching Geography using maps
2. Be aware of the location of land—place emphasis on the relationship of location
3. Be cognizant of geographical terms and symbols
4. The rationale behind collecting reference documents
5. Encourage thinking about the relationship between regional localities
6. The first time to explore various regions in Japan
7. Would like to encourage an attitude of allowing pupils to do research and ask questions so that they are able to discuss the subject simply.
8. Have pupils write about their research in notebooks
9. Emphasize the relationship between lines of latitude and ocean currents
10. Pay attention to the fundamentals—map reading, inland, climate
11. Pay close attention to selection of research document
12. Emphasize the connections between ways of reading other texts
13. I would like to become more aware of the relationship between nature and humanity
14. I would like to able to offer interesting explanations of pictures
15. Let pupils practice sketching while using a small black board
16. Do comparative research
17. Use a map showing climatic trends, including temperature and precipitation
18. Encourage research by posing a simple question and have pupils come up with answers
Appendix B: Teacher’s Evaluation of the Geography Lessons in Practice before the Lesson Study

Impressions of the geography lessons
I could not forget the events of early May, 1930. I wondered what pupils, who are as pure as blank sheets of paper, thought about learning geography, and I listened carefully to their honest opinions. As a result, there were twenty five comments from twenty two students, about why they liked learning geography, while forty students gave fifty three reasons for their dislike of geography.

<table>
<thead>
<tr>
<th>Favorable Comments</th>
<th>Number of Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interesting</td>
<td>4</td>
</tr>
<tr>
<td>Advantageous for travel</td>
<td>3</td>
</tr>
<tr>
<td>Can draw maps with names</td>
<td>3</td>
</tr>
<tr>
<td>Can draw maps and look for details</td>
<td>2</td>
</tr>
<tr>
<td>I like travel</td>
<td>9</td>
</tr>
<tr>
<td>Easy to understand</td>
<td>2</td>
</tr>
<tr>
<td>Many things I liked</td>
<td>1</td>
</tr>
<tr>
<td>Could learn about other regions</td>
<td>1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Unfavorable Comments</th>
<th>Number of Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maps are difficult</td>
<td>1</td>
</tr>
<tr>
<td>Difficult</td>
<td>11</td>
</tr>
<tr>
<td>Don’t understand when map is pointed to</td>
<td>10</td>
</tr>
<tr>
<td>Reason</td>
<td>Number of Responses</td>
</tr>
<tr>
<td>------------------------------------------------------------------------</td>
<td>---------------------</td>
</tr>
<tr>
<td>Hate examinations</td>
<td>7</td>
</tr>
<tr>
<td>Travel is tiring</td>
<td>2</td>
</tr>
<tr>
<td>Don’t know the names of travel destinations</td>
<td>7</td>
</tr>
<tr>
<td>Too complicated</td>
<td>2</td>
</tr>
<tr>
<td>Too many details</td>
<td>3</td>
</tr>
<tr>
<td>Dislike confusion</td>
<td>1</td>
</tr>
<tr>
<td>Don’t know regional names</td>
<td>2</td>
</tr>
<tr>
<td>There’s no one to help me</td>
<td>1</td>
</tr>
<tr>
<td>I hate travel</td>
<td>2</td>
</tr>
<tr>
<td>I can’t read the difficult characters</td>
<td>1</td>
</tr>
<tr>
<td>Difficult to draw pictures of local products</td>
<td>1</td>
</tr>
<tr>
<td>Difficult to research</td>
<td>1</td>
</tr>
<tr>
<td>I can’t do geography</td>
<td>1</td>
</tr>
</tbody>
</table>

(Kijō Elementary School Archive, used with permission)

Appendix C: Teacher’s Evaluation of the Geography Lessons in Practice after the Lesson Study

I must admit that I am to blame for many of these responses. When learning geography for the first time, pupils are expected to remember a large amount of information. I ignored the obvious fact that learning geography of one’s region requires an enormous amount of effort. In light of this, I thought I would like to start anew and try to teach geography that is interesting and fun. The following is a report of these changes (late September, 1930).

<table>
<thead>
<tr>
<th>Favorable Comments</th>
<th>Number of Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>It’s interesting</td>
<td>3</td>
</tr>
<tr>
<td>Studying is interesting and fun</td>
<td>2</td>
</tr>
<tr>
<td>I like to travel</td>
<td>13</td>
</tr>
<tr>
<td>I like using maps for travel</td>
<td>7</td>
</tr>
<tr>
<td>I learned a lot about the locations of prefectures and capitals</td>
<td>6</td>
</tr>
<tr>
<td>I enjoy looking at sketches and maps</td>
<td>5</td>
</tr>
</tbody>
</table>
The color is yellow 1
I enjoy sketching outlines 2
I know what comes from which prefectures 2
I learned about my own home and heritage 2
I learned about prefectures and mountains 1
I learned the names of places for when I travel 1
I used a map to find things 7
I won’t be embarrassed to go places 1
I can guess at what the teacher is saying 6
I can find where products come from 11
I like talking about geography 2
I understand geography 4
I can use a map to find places 2
I like to think 2

Examples of Satisfied Pupils

- Ishihara Setsurō
  I really like geography. 1) I can find out many things by looking at map; 2) I love learning about many towns and cities; 3) Because I can easily understand the teacher’s questions, and have interesting discussion for an hour; 4) Because it’s interesting to study how topography of land has developed.

- Ōta Hitoshi
  I just really like geography. 1) Because I can understand what is being taught and how to use the information that I learn in the classroom; 2) I can learn about the names of prefectures and my own family history; 3) Because my father teaches me with such single-minded determination.

Unfavorable Comments

<table>
<thead>
<tr>
<th>Statement</th>
<th>Number of Responses</th>
</tr>
</thead>
<tbody>
<tr>
<td>The teacher asks unexpected questions</td>
<td>6</td>
</tr>
<tr>
<td>Too many details</td>
<td>3</td>
</tr>
<tr>
<td>Too much to think about</td>
<td>1</td>
</tr>
<tr>
<td>Difficult to remember</td>
<td>6</td>
</tr>
<tr>
<td>I don’t know the names of places</td>
<td>6</td>
</tr>
<tr>
<td>Difficult</td>
<td>6</td>
</tr>
<tr>
<td>I don’t like looking at maps</td>
<td>3</td>
</tr>
<tr>
<td>We have to read books on geography</td>
<td>1</td>
</tr>
<tr>
<td>I dislike research</td>
<td>1</td>
</tr>
<tr>
<td>Because we have to do research</td>
<td>1</td>
</tr>
<tr>
<td>I hate having to look stuff up</td>
<td>1</td>
</tr>
<tr>
<td>I don’t like travel</td>
<td>1</td>
</tr>
<tr>
<td>Travel is bothersome</td>
<td>1</td>
</tr>
</tbody>
</table>

Considering these responses I must concur that poor pupils should not be required to do the same quality of research as their adolescent peers. However, I felt that this was unavoidable since present day youth (pupils in my class) are finally starting to take interest in their studies, and seem glad to spend more class time learning about something interesting.

(Kijō Elementary School Archives, used with permission)
Appendix D: Teachers' Reflective Thinking on the Geography Lessons

“Lesson Study” as Professional Culture in Japanese Schools
**Longitudinal Study in the Geography Lesson**

1. When teaching about the various prefectures, the children seemed to enjoy putting them into the shapes of living creatures, such as a butterfly, elephant, cow, etc.
2. Have flexibility to allow pupils to learn about local products by using songs and haiku 俳句.
3. When teaching about modes of transportation, such as trains or airplanes, start with “Well, now we’re going to take a little trip by train. Take out your maps…”. If you follow this procedure, pupils are happy to participate actively in class.
4. I noticed that pupils thought it was interesting and fun to start the lesson by looking at the postcards and illustrations that they had brought to class. I was glad to observe that pupils were happy with the way that I had changed the previous mistakes of the past, and it became my usual teaching practice to conduct lessons in tandem with them. This was a warning for me to change my teaching style.

**Teachers’ Comments and Evaluation of the Lesson**

- It is not bitterness but an act of love to make people do something they dislike if it contributes toward their growth. It is not resentment but being respectful. It carries the notion of “I’m counting on you to do the right thing”.
- Before using a whip, you must have love; you are only qualified to hold a whip if you have love.
- A sword can be used for both creation and destruction; the wise words of a holy man.
- Education that emphasizes large amounts of memorization kills pupils.
- Don’t think of geography as things to memorize; provide knowledge sparingly. (Alternate between teaching content that needs to be memorized and that which doesn’t require memorization).
- Your teaching practice is more important than merely learning about theory. “Actions speak louder than words”.
- For teaching characters to pupils in the lower grades, choose from a large selection to teach them.
- Adult’s ridicule is a dangerous thing for pupils.
- An educator is a creator of facial expressions.
- Someone who cannot think broadly cannot think deeply.
- One method of saving children is to put them in front of a person of greatness.
- Teachers must behave like teachers, and pupils as pupils.
- Encourage pupils to lead rather than to follow.
- Continue making progress as an educator who constantly follows a clear heart.

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Appendix E: Outline of Teachers' Discussion and Evaluation of a Science Education Lesson Study at Kijō Elementary School in 1930 (Instructor: Sugiura Ito, 4th Grade)

- The classroom facilities
- Instructor's attitude
- Preparation for class
- Relevance to various other parts of the curriculum
- Whether or not questions posed to pupils are refutable
- In keeping with the outline of lesson plans, teach about the general characteristics of swamp plant life related to the lotus plant
- Do pupil-centered teaching
- Let pupils closely observe lotus root, leaves, and stems by themselves
- The necessity of making large diagrams
- Use the blackboard for drawings and diagrams
- Treat them like middle school pupils
- The sound of the lotus flower when it blooms
- The number of stems, leaf pattern, petals, and are the same as the number of perforations in the flower pattern
- Show the vein patterns of a leaf to the pupils
- It's a good idea to plan a field trip to view lotus plants (and include specific points)
- Wall charts: Also prepare for the first year
- Let them experience beauty
- Methods for answering pupils' questions
- From wall charts to actual objects, from object to those depicted in wall charts; let pupils observe objects with five senses for best accuracy
Appendix F: Teachers' Discussion, Evaluation and Critical Comments on a 6th Grade Science Education Lesson Study at Kijō Elementary School in 1930

● Sugiura 杉浦, A 4th grade teacher (Based on his participant observation notes)
1. Course procedure should start with something from vinegar that is related to life
2. Feelings toward class and school rules
3. Appropriate standards for studying methods
4. Talk about lunch boxes: As one example, “Will acid penetrate an aluminum lunch box?”
5. Write on the blackboard about the transformation of alcohol to vinegar
6. Discuss the experiment in more detail
7. After the experiment, wash the tools and aluminum case and store them

● Egawa 江川, A 5th grade teacher (Based on his participant observation notes)
1. Check the class preparation
2. Check the shift training
3. Check the teacher’s attitude
4. Take care when you put something heavy made from metal into a test tube
5. Pupils’ experiments are mechanical
6. Check how pupils work together in clean up

● Isomura 磯村, An advanced course teacher (Based on his participant observation notes)
1. Attitude, methods, and preparation should be clear and organized
2. The process of making vinegar; the possibility of making vinegar from only alcohol
3. Talk about Handa 半田 Vinegar Company
4. Make sure that the results from the experiment are duly written down in the record book
5. Help the teacher to conduct the experiment
6. Conduct the class more as an advisor than as a teacher

(Kijō Elementary School Archive, used with permission)
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NOTES

1 The title of the monthly journal ”Dōshi dōgyō” means “colleagues collaborative,” and refers to people who have similar aims and practices who come together to write, publish and share experiences from their classroom activities and so learn from each other. The journal provided space for teachers to publish their best practices, lesson plans, and reports of how they revised their teaching based on group discussion in school. Ashida was the journal’s editor. (Ashida, 1936a).

2 Ashida divided reading lessons into seven parts. He first asked children to read the text, and then to decipher the content. He read the teaching material again, then asked children to write about the content in their notebook. He then asked them to return to the teaching material once more and read it, and write the main learning points on blackboard. Once again he asked children to discuss the main
content on the blackboard, and finally he got them to read the content and points of learning which he compiled on the blackboard, (Ashida 1938; 1973).

3 Dōshi dōgyō reported many cases of lesson study in different subjects taking place at elementary schools throughout Japan in the 1930s. Authors of lesson study included: Kamo Gakuji 加茂學己, 1936 (Yokouchi Shōgakkō 横内小学校); Matsuo Sadakichi 松尾禎吉, 1936 (Tago Shōgakkō 田子小学校); Omi Nobuichi 大見延一, 1936 (Futagawa Seibu Shōgakkō 二川西部小学校); Ashida Enosuke 芦田恵之助, 1936b (Ōgaki Shōgakkō 大垣小学校); Ashida Enosuke, 1936c (Hekikai gun Shinkawa Shōgakkō 碧海郡新川小学校); Ashida Enosuke,1936d (Tokyo shi Aoyagi Shōgakkō 東京市青柳小学校); Iwasaki Noriko 岩崎紀子, 2001(Toyama ken Shihan Gakkō Fuzoku Shōgakkō 富山県師範学校附属小学校).

4 Kijō elementary school has a long history. It was founded as a samurai school, and was restructured based on educational law in the early Meiji era as hankō 藩校 Bunreikan 文礼館 in 1873. It was the first modern public elementary school in the Kariya area.

5 The concept of “managers of learning” is discussed at length in Cave 2007.
他の国に導入する場合に、どのような点に留意しなければならないのかを考える重要な示唆が得られるのではないかと思う。