

Lesson Study to Create Social Studies Lesson Plans in Japan: The Case of “Logic of Triple-stacking” at Shinshiro Elementary School

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Abstract

This research conducts a case study to clarify the characteristics of the lesson study process used to create social studies lesson plans in Japan. The case study focuses on the “logic of triple-stacking” employed by Shinshiro Elementary School (SES), clarifying its process and examining its characteristics. Two main findings are notable. First, the SES social studies lesson study method based on the logic of triple-stacking focuses on social consciousness and teaching materials for children that pursue problems identified by the extracted children. Second, the method allows educators to transform social studies lesson composition to deepen and modify the thinking processes of the extracted children.

Keywords: lesson study to create social studies lessons plans, Shinshiro elementary school, logic of triple-stacking

Purpose of this Research

This research aims, based on a case study, to clarify the characteristics of lesson study practices used to create social studies lessons plans in Japan. Currently, Japanese lesson study methods are gaining increasing interest worldwide in the study of pedagogy (Sato, 1997). Recent pedagogical research in Japan has also been conducted to propose a lesson study methodology for social studies (Umezu & Harada, 2015). Watanabe (2012), for example, has accumulated data through “experimental science” research on social studies from the perspective of lesson study, and through proactive collaboration with experts in other fields. Furthermore, presenting empirical data regarding social studies lesson study methods in Japan offers a perspective against which to compare and examine social studies lesson study methods throughout Asia.

This paper focuses on the lesson study method of Syakaika no Syoshi wo Tsuranuku Kai, a private education and research organization that pursues ideal solutions for social science problems in post-war Japan. Specifically, the Syakaika no Syoshi wo Tsuranuku kai lesson study method involves “consistently conducting lesson study emphasizing children’s thinking system,” and is regarded as “lesson study as an exercise” (Harada, 2011, p.229). As a representative form of Syakaika no Syoshi wo Tsuranuku kai lesson study (Matoba, 2017, p.104), the method employed at Shinshiro Elementary School (SES) in Shinshiro, Aichi Prefecture, is worth mention. Using the “lesson study system” at SES (Atsumi & Shinshiro Elementary School, 1986), “everyone carries out a study of a class by this system, and a certain result is produced and research is accumulated” (Shimoda, 1986, p.267). Additionally, the system facilitates a style of problem-solving learning in which children are “attracted to and learned” (Ichikawa, 1986, pp.256-262).

Existing research has addressed some aspects of the lesson study system employed by SES. A study by

Kimura (2009a; 2009b) concerned SES principal Atsumi Toshio, an educational practitioner representing *Syakaika no Syoshi wo Tsuranuku kai* who pursued the goal of “social studies anyone can do” through development and dissemination of lesson study systems. Matoba (2011, p.436) revealed that the lesson study systems at SES created three-tiered “multi-track lesson plans” that included 1) an individual teacher, 2) a group of education specialists, and 3) the teacher. A distinctive feature of these lesson plans is that they anticipate that the lesson may overflow into multiple classes and make this clear to the instructor. Shirai (2018a) clarified that the preliminary examination conducted to prepare a learning instruction plan, called “the logic of triple-stacking,” was unique in SES’s lesson study systems. Altogether, previous research has identified SES’s lesson study systems as a factor promoting problem-based learning.

However, research has not yet concretely specified what type of social consciousness the lesson plans created through this system aim to form. One reason for this is that social studies research has not sufficiently examined the “logic of triple-stacking” (Shinshiro Elementary School, 1985a; 1985b), a characteristic process in SES’s lesson study system. Moriwake (1985, p.189) states that objective of lesson study research conducted from the perspective of social studies is “to clarify what kind of quality of social recognition is to be formed logically and practically, in each position and theory.” Therefore, this study created lesson plans based on SES’s logic of triple-stacking, adopting that theoretical perspective, in an attempt to clarify the type of social consciousness to be formed. In so doing, it clarifies the data and provides an analytical consideration.

Logic of Lesson Study for Creating Social Studies Lesson Plans at SES

The logic of triple-stacking employed by SES provides educators with multiple opportunities to consider lesson plans, for example during creation of a preliminary lesson plan, prior study during sectional meetings, the study lesson, and the first and second study meetings. Moreover, SES’s logic of triple-stacking is unique in that it includes prior examination in creation of lesson plans (Shirai, 2018a, p.30).

The “logic of triple-stacking” refers to a process in which three plans are successively developed, building upon one another. During the preliminary examination and preparation of a lesson plan, the conventionally considered unit concept is plan A; plan B that describes how an extracted child responds to several clusters within the unit. Plan C is developed by repeating plans A and B, based on the actual circumstances and individual wishes of the extracted child (Shinshiro Elementary School, 1985b, p.58). The final revised lesson plan (Plan C), prepared based on the logic of triple-stacking as illustrated in Figure 1, is considered to be “the core of how the extracted child deepens thinking”; this procedure is unique for preparing learning lesson plans (Shirai, 2018a, p.31).

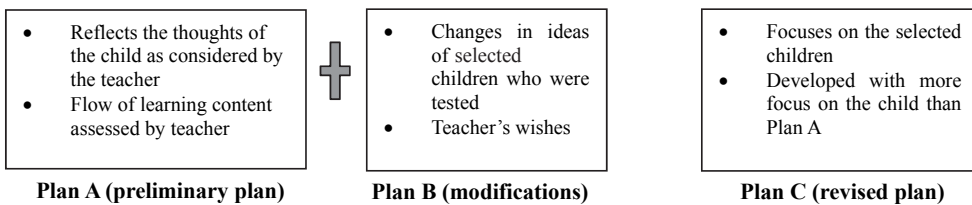


Figure 1. Logic of triple-stacking (based on Shinshiro Elementary School, 1985b, p.75).

This study considers SES's logic of triple-stacking as an example by which to empirically clarify the specific features of the learning lesson plans created through social studies lesson study at SES.

Preparation of Learning Lesson Plans through the Logic of Triple-stacking

Plan A: Prediction of Teaching Materials and Ideas of Extracted Children

To clarify what type of social consciousness lesson plans based on the logic of triple-stacking aim to form, this study considers the case of a 6th-grade social studies lesson plan, "When the city was in Nara and Kyoto," addressed at SES in 1985. Below, the process of lesson plan creation using the logic of triple-stacking will be examined and described based on concrete examples from this social studies learning lesson plan (Shinshiro Elementary School, 1985b).

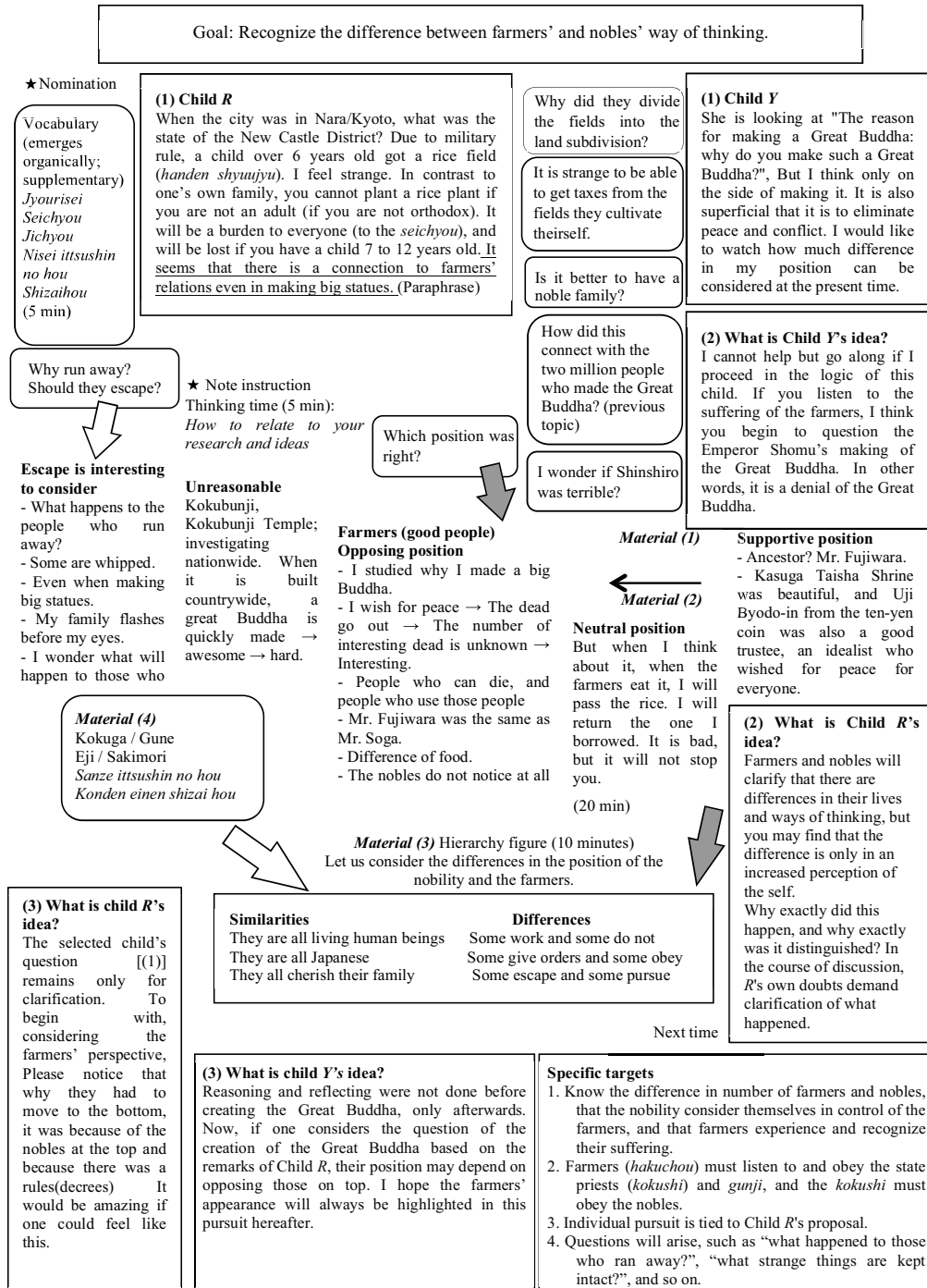
Plan A was developed, as shown in Figure 2. In Plan A, "the teacher shows the process of task solution with strong lesson intentions" (Shinshiro Elementary School, 1985b, p.75). Based on this preliminary plan, two main characteristics of the lesson study method of creating social studies lesson plans that can be identified.

First, as shown, social consciousness is centered on the teaching materials. The goal of Plan A is for students to "recognize the difference between the farmers' and nobles' ways of thinking" (Shinshiro Elementary School, 1985b, p.750), and social consciousness was shown to be in line with this goal. Plan A's learning targets include knowing the approximate difference in number of farmers and nobles, that nobles consider themselves in control of farmers, and that farmers experience and recognize their suffering; and furthermore, that state priests (*kokushi*) generally understand they must heed the nobles' words. In other words, in the preliminary Plan A examination, social consciousness was focused on the teaching materials.

Second, learning questions were listed sequentially, and focused on predicting the ideas of an extracted child. Specifically, questions included: "Why run away?" "Why did they divide the fields into the land subdivision?" "It is strange to be able to get taxes from the fields they cultivate themselves" "Is it better to have a noble family?" "How did this connect with the two million people who made the Great Buddha?" and "Which position was right?" In other words, learning questions concerning the psychology of nobles and farmers in Heian-era Nara were presented. In short, the preliminary Plan A examination presented learning problems sequentially and focused on predicting the ideas of an extracted child.

To "make the most of the child's ideas," the SES process using the logic of triple-stacking considers it necessary to modify this preliminary Plan A through preparation of Plans B and C. In Plan A, "the ideas of the children are arranged only in line with the teaching materials; their immediate ideas, materials, and feelings are drawn out sequentially." This was considered as the "lesson plan at the time of satisfied with just by enumeration" (Shinshiro Elementary School, 1985b, p.75). Moreover, SES stated a desire to incorporate the children, and it was considered important to gradually transcend from the teaching "material-centered lesson plan" (Shinshiro Elementary School, 1985b, p.75).

In all, the preliminary examination used to create Plan A is characterized by social consciousness built on teaching materials, sequential presentation of learning problems with predictions regarding extracted children, and joint preparation of the lesson plans.



Why run away?
Should they escape?

Escape is interesting to consider
 - What happens to the people who run away?
 - Some are whipped.
 - Even when making big statues.
 - My family flashes before my eyes.
 - I wonder what will happen to those who

★ Note instruction
 Thinking time (5 min):
How to relate to your research and ideas

Which position was right?

Unreasonable
 Kokubunji, Kokubunji Temple; investigating nationwide. When it is built countrywide, a great Buddha is quickly made → awesome → hard.

Farmers (good people) Opposing position
 - I studied why I made a big Buddha.
 - I wish for peace → The dead go out → The number of interesting dead is unknown → Interesting.
 - People who can die, and people who use those people
 - Mr. Fujiwara was the same as Mr. Soga.
 - Difference of food.
 - The nobles do not notice at all

Material (1)
 ←
Material (2)
 Neutral position
 But when I think about it, when the farmers eat it, I will pass the rice. I will return the one I borrowed. It is bad, but it will not stop you.
 (20 min)

(2) What is Child R's idea?
 Farmers and nobles will clarify that there are differences in their lives and ways of thinking, but you may find that the difference is only in an increased perception of the self.
 Why exactly did this happen, and why exactly was it distinguished? In the course of discussion, R's own doubts demand clarification of what happened.

Material (4)
 Kokuga / Gune
 Eji / Sakimori
Sanze ittushin no hou
Konden einen shizai hou

Material (3) Hierarchy figure (10 minutes)
 Let us consider the differences in the position of the nobility and the farmers.

(2) What is Child R's idea?
 Farmers and nobles will clarify that there are differences in their lives and ways of thinking, but you may find that the difference is only in an increased perception of the self.
 Why exactly did this happen, and why exactly was it distinguished? In the course of discussion, R's own doubts demand clarification of what happened.

(3) What is child R's idea?
 The selected child's question [(1)] remains only for clarification. To begin with, considering the farmers' perspective, Please notice that why they had to move to the bottom, it was because of the nobles at the top and because there was a rules(decrees) It would be amazing if one could feel like this.

Similarities	Differences
They are all living human beings	Some work and some do not
They are all Japanese	Some give orders and some obey
They all cherish their family	Some escape and some pursue

Next time

(2) What is Child R's idea?
 Farmers and nobles will clarify that there are differences in their lives and ways of thinking, but you may find that the difference is only in an increased perception of the self.
 Why exactly did this happen, and why exactly was it distinguished? In the course of discussion, R's own doubts demand clarification of what happened.

(3) What is child Y's idea?
 Reasoning and reflecting were not done before creating the Great Buddha, only afterwards. Now, if one considers the question of the creation of the Great Buddha based on the remarks of Child R, their position may depend on opposing those on top. I hope the farmers' appearance will always be highlighted in this pursuit hereafter.

Specific targets

1. Know the difference in number of farmers and nobles, that the nobility consider themselves in control of the farmers, and that farmers experience and recognize their suffering.
2. Farmers (*hakuchou*) must listen to and obey the state priests (*kokushi*) and *gunji*, and the *kokushi* must obey the nobles.
3. Individual pursuit is tied to Child R's proposal.
4. Questions will arise, such as "what happened to those who ran away?", "what strange things are kept intact?", and so on.

Figure 2. Social studies lesson plan A: "When the City was in Nara and Kyoto"
 (based on Shinshiro Elementary School, 1985b, p.76).

Plan B: Logic of Extracted Children and Discussion

In Plan B (Figure 3), the extracted children *R* and *Y* consider what perspective they might acquire and what they think about acquiring it (Shinshiro Elementary School, 1985b, p.78). Two main features of the social studies lesson study of social studies for creating lesson plans can be identified through Plan B.

First, social consciousness is focused on the logic of the extracted children. Specifically, Child *R*'s logic, conveyed by the statements "Sympathy as pity for farmers," "Farmers can only live in that way; it cannot be helped," and "The emperor and the nobility led like they wanted to make their own lives simpler," provide a target for social consciousness. Behind this method is SES's belief that "following the path of thought deepening is, in fact, consistent with planning how the lesson will develop" (Shinshiro Elementary School, 1985b, p.78). In this way, social consciousness is shown to center on the logic of extracted Child *R*.

Second, the lesson structure centers on discussions, with the goal of changing Child *R*'s thinking. Specifically, the lesson plan aims to change the extracted child's thinking to facilitate "Deepening of the idea" "Expansion of the idea" "Anxiety about the idea" "Raising of the question" and "Development of the idea." SES considers Plan A's design, which was list based, to be problematic; "the concrete method in the discussion, and the purpose of wanting it like this, are not included at all" (Shinshiro Elementary School, 1985b, p.78). Therefore, the goal of encouraging students to talk during the lesson intends to help them acquire new perspectives and deepen their individual thinking. Thus, the lesson plan was formulated that included "concrete discussion methods" and "discussion goals" (Shinshiro Elementary School, 1985b, p.78). In this way, it implements a lesson structure centering on discussion, with the aim of changing the extracted children's perspectives.

When creating Plan B, it is left to the teacher in charge to determine how to grasp the logic of the extracted children, but this does present an area of uncertainty (Shinshiro Elementary School, 1985b, p.78). The significance of prior examination in drafting Plan B is indicated by the focus on the extracted child's logic in building social consciousness, and the lesson structure centering on discussion and aiming to change the extracted child's perspective. Such a plan is to be developed jointly by teachers.

Review of Child R's proposal (Review of extracted child related at this time)

It seems that Child R was sorry to capture the reality of farmers on the surface. Child R's logic developed through comparison with "great" people. However, the actual condition of the "great people" themselves is ambiguous and not concrete. It is interesting to see what the farmers are trying to do about the cause of the status difference, and how the emperor/nobles at the top are trying to stabilize their position.

⌘ Examining the logic of this child will help to clarify his/her wishes.

Review of Child Y's proposal
⌘ Forecasting prediction expectation

★Time to think. What a class child would stick to the proposal of child R.
(1) Words used many times during the presentation: "poor thing," "great people"
(2) Factual confirmation as class trends
(3) In contrast to 1-2, the emotional expression itself; "poor," "hikkyo," "selfishness"

⌘ Instructions for brief notes about the contents of the proposal will be required for children of the class.

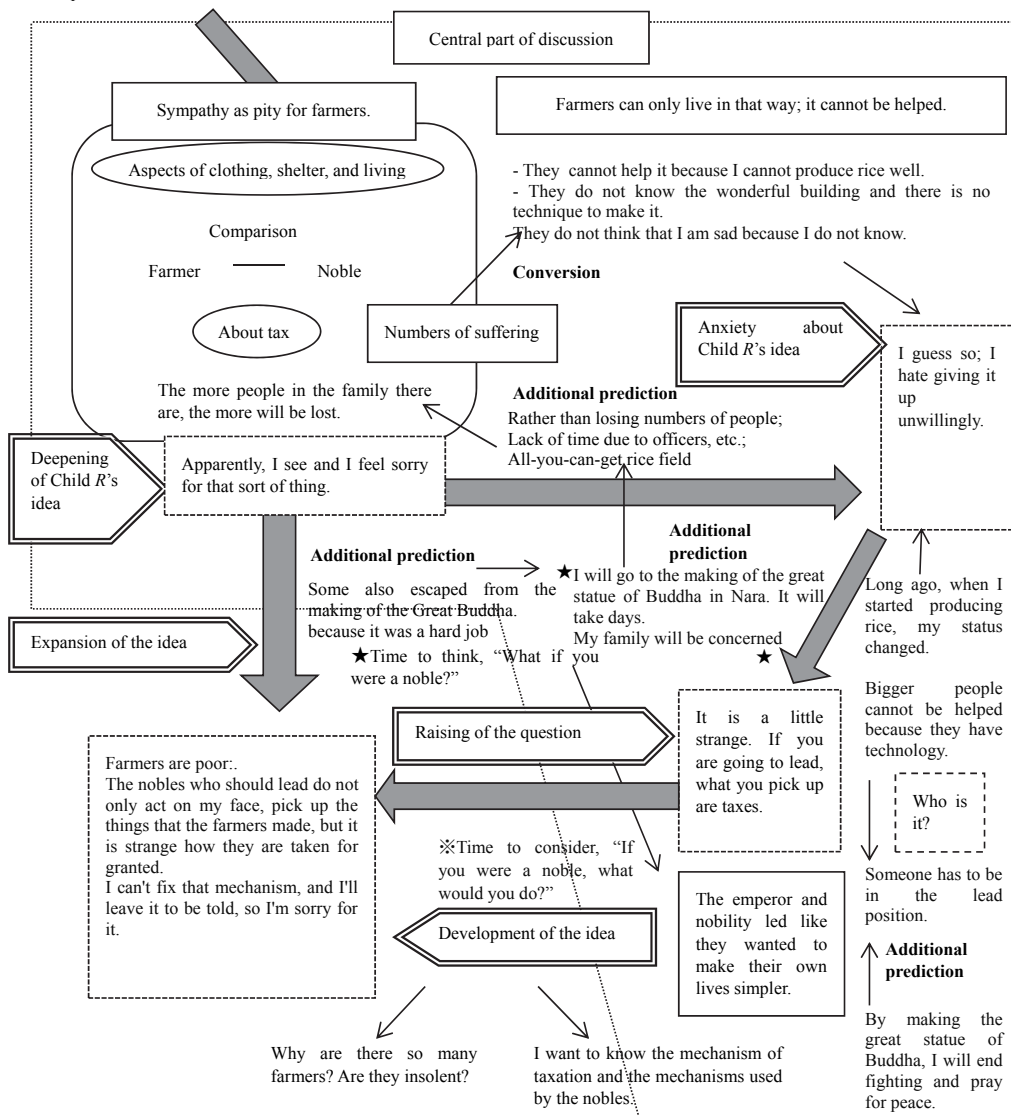


Figure 3. Social studies lesson plan B: "When the City was in Nara and Kyoto"
(based on Shinshiro Elementary School, 1985b, p.77).

Plan C: Acquisition of Explanatory Knowledge and Focus on the Transforming Extracted Children's Thoughts

Plan C is developed as the final step in the process. SES thought that “when repeating Plan B to Plan A, we notice that the development of Plan A is progressing quickly, and feel that it is necessary to overlook if you wish too much” (Shinshiro Elementary School, 1985b, p.78). In addition, as for Plan B, “if you capture the logic of the extracted child and make the children involved in the class appear, you will be forced to change the goal, flow, and edge of the Plan A” (Shinshiro Elementary School, 1985b, p.78). Plan C, shown in Figure 4, is intended to resemble Plan B in form (Shinshiro Elementary School, 1985b, p.78). Like Plans A and B, it characterizes two main features of the lesson study process for creating social studies lesson plans.

First, the learning goal for extracted children *R* and *Y*, conveyed by the question “Why do farmers think they have to live a poor life in relation to people from a noble family?” is acquisition of explanatory knowledge. Specific learning targets in Plan C include “I recognize that there is a large difference between farmers and nobility in clothing, shelter, and lifestyle,” “I understand that suffering is due to taxation,” and “I am interested in the country’s mechanisms to support the emperor and aristocracy.” In line with these targets, the plan seeks to help extracted children *R* and *Y* acquire explanatory knowledge. This purpose is driven by a desire to “a child’s logic becomes the main subject of the lesson” Shinshiro Elementary School, 1985b, p.75. Therefore, Plan C encourages each child to acquire explanatory knowledge that makes his or her logic the subject of the lesson.

Second, the lesson is composed with the aim of “hitting” Child *Y*’s idea and “swinging” the idea against that of Child *R*. For example, Child *R* thinks that “The farmers are sorry for the first time in their lives. I wonder why there are differences in standards of living between the aristocracy and the farmers,” whereas Child *Y* thinks that “The heart of the emperor praying for peace justifies creating a great statue of Buddha”; the lesson is structured based on “hitting” and “swinging” with respect to this perspective of Child *Y*. To this end, the participation of the teacher should be minimal, limited to providing instructions on notes, “guaranteed time to reconsider and reexamine the assumption that someone was poor, and the question “what if you were a noble?” This is explained by SES’s belief that “preparing and selecting the supporting documents, providing materials for children who wish to use them, and posing questions are necessary” (Shinshiro Elementary School, 1985b, p.78).

When creating Plan C, SES considers eight check points according to the perspective of prior examination: 1. How to express the goal; 2. Double-line character; 3. Curving corner of the lesson, what will be an exciting scene; 4. Evaluation and conclusion; 5. Contrivance according to difference in ability; 6. Method of the extracted child (make it a double method); 7. Allocation of time; and 8. Endpoint (Shinshiro Elementary School, 1985b, pp.80-82). According to this checklist, the lesson’s learning content is reformed (Shinshiro Elementary School, 1985b, p.85 by specifying a current goal), and the lesson plan is revised accordingly. Thus, Plan C’s prior examination focuses on each child’s acquisition of explanatory knowledge, and its lesson composition aims to “swinging” the extracted children’s thoughts through “hitting” the children’s thoughts. Such a lesson plan is developed jointly by the teachers.

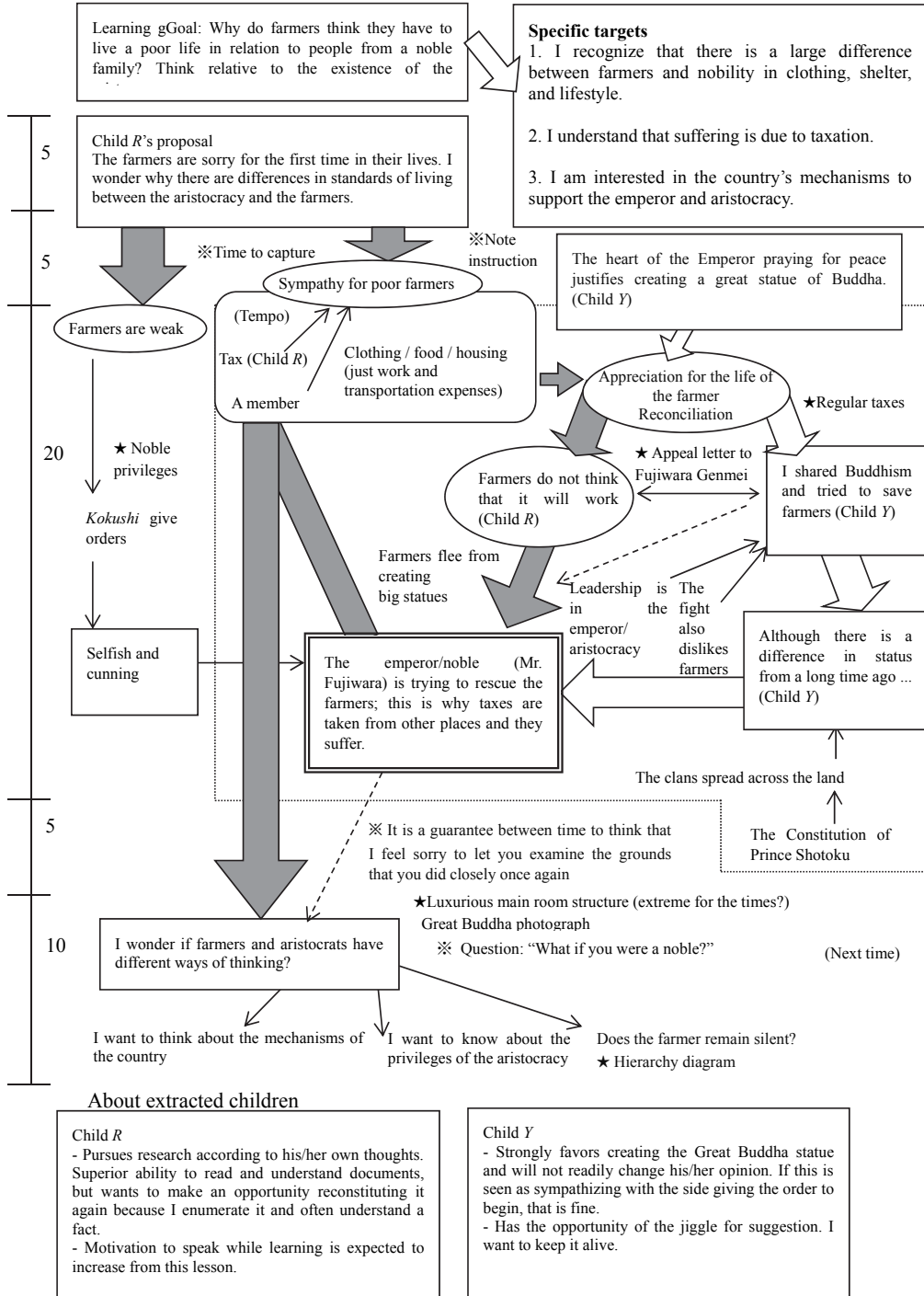


Figure 4. Social studies lesson plan C: "When the City was in Nara and Kyoto"
 (based on Shinshiro Elementary School, 1985b, p.79).

Conclusions and Future Research

This paper focuses on the logic of triple-stacking employed by SES during lesson planning, and on the creation of lesson plans, to determine the characteristics of the lesson study process for creating social studies lesson plans in Japan. The results clarify two main points regarding the social consciousness formed by lesson plans created using this method.

First, the study clarifies the types of social consciousness SES's logic of triple-stacking aims to form. Initially, social consciousness is focused on teaching materials, shown through the preliminary creation of Plan A. Next, in Plan B, social consciousness is built on the logic of extracted Child R. Finally, Plan C focuses on acquisition of explanatory knowledge that makes each child's individual logic a main subject of the lesson. In other words, through SES's logic of triple-stacking, it became clear that the aim of social consciousness was to focus on the teaching materials to those in line with the problem awareness of extracted children.

Second, SES's logic of triple-stacking clarifies the way in which social consciousness is created. Initially, in the preliminary Plan A, learning problems are presented sequentially, focusing on the predicted ideas of an extracted child. Next, in Plan B, the lesson structure centers on discussion, with the aim of changing extracted Child R's perspective. Finally, in Plan C, the lesson structure intends to "jump" on the idea of Child Y and "swing" it against the idea of extracted Child R. In other words, through the process of lesson study based on SES's logic of triple-stacking, social studies lesson composition was transformed to deepen and change the thinking of the extracted children.

A potential future research topic would be to clarify the significance of the SES logic of triple-stacking in the historical development of social studies lessons in Asia. The National Association for the Study of Education Methods (NASEM) promotes research elucidating the characteristics of Japanese lesson study to pursue transferability of the methods to Asia (National Association for the Study of Education Materials, 2011). Similarly, the World Association of Lesson Studies (WALS) actively promotes international research exchange on lesson study methodology (Shibata, 2017). In the field of social studies education, Iwano (2015) and Ikeno (2017) have presented perspectives that contribute to Asian social studies lesson study by clarifying the characteristics of Japanese lesson study in social studies. Nasution (2015) indicates that lesson study in Indonesia was introduced and initiated by experts from the Japan International Cooperation Agency (JICA).

Similarly, research that identified the characteristics of social studies practice lessons in the Mikawa area of Aichi Prefecture of Japan provided a new perspective that was relevant to Indonesian social studies lesson methods (Shirai, 2018b). The results of this case study of SES's logic of triple-stacking could provide suggestions and implications for social studies lesson study methodology throughout Asia. Future research should explore the potential applications of the logic of triple-stacking in modern Asian social studies lesson study practices.

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