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A Constitutive Principle of Regional Geographical Learning That Reconstructs Stereotypical Regional Representation in Elementary School Social Studies

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Abstract

This study proposes a lesson model for reconstructing stereotypical regional representations in regional geographical learning in elementary school social studies. Previous studies on geography education have suggested that regional geographical learning could create stereotypes regarding places, regions, and countries through simplification, fixation, and othering. Recent geographical studies have considered regions as socially-constructed products. Therefore, based on social constructivist learning, children must examine, criticize, and reconstruct their own regional representations. Based on the results of social psychology research and area studies, five strategies (consciousness of stereotyping, decategorization, recategorization, cross-cutting categorization, and metacognition of recategorization) based on human mental responses are important for reconstructing stereotyped regional representations. To develop a lesson model that incorporates these strategies, it would be effective to incorporate the Knowledge Constructive Jigsaw method, which aims to generate collaborative knowledge, into the Social Construction Reconstructive Regional Geographical Learning to examine, critique, and reconstruct regional representations using geographical concepts. This lesson model allows children to relativize their stereotypes and reconstruct new regional representations through dialogue.

Keywords: Stereotype, Regional representation, Collaborative learning, Regional geographical learning, Elementary social studies

Introduction

A stereotype is an assumption or fixed image that one has of people belonging to a particular group (Kamisa, 2002, pp. 1-4). Geography education research considers stereotypes not only of people and groups but also of fixed, simplified, and standardized images of places, regions, and countries. Studies dealing with stereotypes have discussed issues such as the promotion of prejudice and discrimination, and the formation of aversion and exclusionary attitudes (Roberts, 2013; Catling & Willy, 2018, p. 386; Arai, 2021).

In a highly information-oriented modern society, stereotypes are easily formed and reproduced.

Stereotypes are closely related to regional representation, which is an interpretation of a region by a certain entity in accordance with its intentions and aims and is a representation of the region based on distinctive features of the region. The development of social media has made it easy for anyone to send and receive regional representations. However, the Internet and social networking services have created a situation in which so-called “fake news” or false information, images, and videos are disseminated (Fujimura, 2022). Many are intended to manipulate public opinion and the image of a particular country or region. Regional representation significantly influences the formation of stereotypes among many people. Stereotypes tend to be widely shared and diffused through social networking services, which have characteristics such as “echo chambers” and “filter bubbles” (Tanaka et al., 2016). Therefore, stereotypes of countries, regions, and places are likely to be formed, maintained, and reinforced among people in the current situation.

Regional geographical learning in social studies aims to help children develop a balanced regional (world) view by exploring the regional characteristics of both Japan and the world. However, does regional geographical learning in social studies have a teaching strategy that responds to such social conditions? In particular, the nature of regional geographical learning in elementary schools is debatable. At the elementary school level, especially from middle to high grades, children’s geographical knowledge, thinking ability, and spatial perspective expand and grow rapidly (Yamaguchi, 2002). During this period, children’s crude stereotypes are likely to be easily influenced by media, interactions, and social group pressures. Additionally, it is difficult to correct stereotypes after elementary school (Scoffham, 2010). Therefore, classroom practice is required to prevent stereotyping in elementary school.

The elementary school social studies curriculum, based on the current Courses of Study, includes regional geographical learning based on expanding environments approach in each grade (Yoshida, 2023). These studies are included in the “Geographical Environment and People’s Lives” content of the Courses of Study, for example, “Study of neighboring regions and municipalities” in Grade 3, “Study of prefectures” and “Study of distinctive regions in the prefecture” in Grade 4, and “Japan’s national land and national life” in Grade 5 (MEXT, 2018). However, it is questionable whether classroom practices contributing to the avoidance of stereotype formation have been developed in these units. In many classroom practices based on courses of study and textbooks, teachers and curriculum developers select views, ideas, and interpretations that foster a sense of being a member of the local community and an attitude of caring for the local community. This leads to learning in which children uncritically accept such views, ideas, and interpretations (Moriwake, 1996). The knowledge acquired in this way is limited to individual knowledge, which cannot be applied, and common-sense knowledge based on unilateral values. Consequently, children may develop stereotypes about regions and places.

Primarily, regional geographical education has the fundamental problem that “regional characteristics” depend on the arbitrariness and subjectivity of teachers and curriculum developers. Previous studies on regional geographical learning have indicated that children may accept “regional characteristics” presented by others as unquestionable facts, thereby narrowing their perception of the region (Kusahara, 2001; Nakamoto, 2014). In addition, because regional geographical learning aims to form a national consciousness and view of the nation, it promotes differentiation and, to some extent, the stereotyping of countries and regions (Nakayama, 2000). Therefore, regional geographical learning potentially encourages the stereotyping of countries, regions, places, and people, and may foster a biased perception of the world (Nagata, 2004; Roberts, 2013; Arai, 2021). When considering regional geographical learning in elementary social studies that avoids stereotyping, it is necessary

to consider the challenges inherent in regional geographical learning itself. However, there has been limited research on this issue in geography and social studies education to date.

Knowledge has become a socially-constructed concept in recent years. Tanaka (2015) points out that one of the challenges facing social studies education is the ideological nature of knowledge in modern society. Knowledge in a mature society is interpreted in various ways based on diverse ideas and values, and the validity of this knowledge as “objective” is extremely limited in terms of space and time. Therefore, social studies education is required to cultivate the ability of individuals to renew and revise their views and ideas regularly through dialogue with the real world. If we adopt this view of knowledge and learning, we must be aware that “regional characteristics” or “regional features” or features in regional geographical learning can always turn into stereotypes. Accordingly, regional geographical learning in elementary social studies also needs to promote children’s ability to reconstruct their own regional representations, which are created in different ways depending on the context and situation, examine and criticize whether or not they are valid, and create new regional representations.

Therefore, based on previous studies of stereotypes, this study proposes a lesson model for regional geographical learning in elementary social studies that reconstructs stereotypical regional representations. The research procedure is as follows.

- (1) To clarify the results and problems of previous research on teaching geographical stereotypes.
- (2) Based on the results of social psychological and area studies, we will clarify the principles of instruction for reconstructing geographical stereotypes.
- (3) To show that the jigsaw learning method, especially the “Knowledge Constructive Jigsaw method” proposed by the Consortium for Renovating Education of the Future (at the University of Tokyo), is effective in implementing lesson based on the above principles.
- (4) Based on the above, we present a lesson model for regional geographical learning in elementary school social studies that reconstructs stereotypical regional representations.

Trends in Geography Education Research Dealing with Stereotypes

What Are Stereotypes?

To clarify the issue of stereotyping in regional geographical learning, this study refers to the findings of social psychology where research on stereotyping has been accumulated.

According to social psychologist Kamise (2002), stereotypes are caused by categorization, which is a process of classifying objects based on their similarities or differences. Stereotypes are characteristics that people in these categories are assumed to share in common (Kamise, 2002, p. 2). The world we live in is diverse and chaotic, although it can be subjectively simplified, organized, and perceived through categorization. This is an essential human response for adapting to the outside world. However, the human cognitive tendency is that categorization emphasizes differences between categories (cognitive emphasis of intercategory differences) and reduces differences within categories (cognitive reduction of intracategory differences) (Kamise, 2002, pp. 22-23). This creates the risk of applying stereotypes off the top of one’s head and making uniform judgments without considering individual characteristics. This is called stereotyping (Kamise, 2002, pp. 12-14).

Studies on stereotypes in social psychology have focused on individuals and groups classified by social

categories such as race/ethnicity, gender, and occupation (Oka, 2009). Extending this to the context of geographical learning, assigning a regional representation to a region or place and determining the regional characteristics of a particular region in geographical learning can also be considered a type of categorization. The cognitive tendency of categorized regions is to emphasize the differences between the region and the outside world, and to reduce differences within the region. In this case, characteristics believed to be common to the region become stereotypical. The problem with stereotyping in regional geographical learning is that it leads to a stereotypical perception of the entire region based on the examples studied. Catling and Willy (2018, pp. 386-387) note that the basis of stereotyping is the creation of archetypes that lead people to assume that all other cases are similar, as if a single story or description of a place, country, or people is sufficient. For example, learning about poverty problems in one case study area in an African country can lead to a uniform perception that the same problems exist throughout the country. Another example is the misconception that poverty problems do not exist outside African states.

If these perceptions remain unchecked, stereotypes can be reinforced after learning as people tend to process information in a hypothesis-confirming manner (confirmation bias), in which stereotypes are confirmed by ambiguous information that matches their ideas, without focusing on information that disproves the stereotypes. Another factor is the mental tendency to automatically activate stereotypes when cues about categories are perceived (Kamise, 2002, pp. 55-64). Research on primary geography education in England suggests that confirmation bias creates an attitude of looking for evidence to support previous beliefs, leading to a lack of criticality and the danger of accepting single stories about others and places (Scoffham, 2010). To avoid stereotyping in the study of regional geography, it is necessary to structure lessons such that students become aware of the bias and single-mindedness of regional representations formed during and after the study.

Research Findings on Stereotypes in Geography Education

Geography education research has investigated strategies for regional geographical learning to avoid stereotypes. In Japan, Nakazawa (1998), Nagata (2004), Nishioka (2005, 2007), and Arai (2021) examined regional geographical learning that avoids stereotypes through a multifaceted and multidimensional understanding of areas, relativization of the self, and cross-cultural understanding aimed at world geographical learning. These studies demonstrated the effectiveness of diversifying perspectives in area studies, examining learning theories, examining and refining learning content, and developing learning methods.

However, there are three problems surrounding these research trends. First, limited research has been conducted at the elementary level except for an international unit in Grade 6 of elementary school. In England, where geography education research is extensive, stereotyping is an important issue in primary geography education. Several geography education studies have noted that learning about distant places carries the risk of forming stereotypes (e.g., Catling & Willy, 2018; Scoffham, 2019). “The danger of a single story” by Nigerian novelist Adichie (2009) and “Orientalism” by Said (1985) expose the problems of primary geography education. Even in recent years, the publication of papers dealing with stereotypes in Primary Geography indicates that this topic is of interest at the elementary level (e.g., Burnett, 2020; Anderson et al, 2022; Corrado, 2022). These studies examined strategies for overcoming the negative effects of stereotypes, such as overgeneralization, oversimplification, and timeless views. The results of the studies showed that the following strategies were effective: making children aware of their own stereotypes, developing critical thinking skills, considering balance and fairness in the organization of units, selecting materials (e.g., landscape photographs), and asking

questions based on diverse perspectives. The Japanese curriculum is based on an expanding environmental approach, and most geographical learning units focus on domestic areas. However, elementary social studies on regional geographical learning in Japan must be improved by utilizing stereotypical studies in England.

Second, related to the first point, stereotypes of domestic regions were not addressed. The main objectives of regional geographical learning in Japan, especially elementary school geographical learning, include understanding the region, cultivating regional and national consciousness, and forming attitudes. However, the dangers of stereotyping are not addressed. Stereotypes can form in any region or place. Given the problems of regional geographical learning and the characteristics of the expanding environmental approach in elementary social studies, it is necessary to learn to relativize stereotypes about one's own country and region, starting with familiar areas. Moreover, a social reality exists in which different entities interpret the region according to their own purposes and create different regional images through media, such as television, newspapers, and the Internet. In many cases, stereotypical regional representations are used to increase the appeal to society or simplify the various phenomena seen in the region. Children develop their personal geography based on information about different worlds in their daily lives, both directly and indirectly (Catling & Martin, 2011). Therefore, it is necessary to develop the ability to examine the quality and relevance of different scales of regional representation available on a daily basis.

Third, the avoidance of stereotypes depends on the presentation of information and selection of learning content by the teacher. Children have no opportunity to become aware of trends and biases in "regional characteristics" perceived by various entities, including themselves and teachers. In addition, the learning process of examining validity and issues while analyzing the process of forming regional representations is not guaranteed. Nagata's (2004) study differs from conventional regional geographical learning in that he considers the ability to eliminate stereotypical views as a geographical skill and attempts to foster this ability in children. However, the new regional representation depends on the teacher's presentation and children cannot overcome it. If we regard the subject who composes regional geographical learning as a learner, it is necessary to develop the ability of children to examine, criticize, and reconstruct the "regional characteristics" and stereotypical regional representations presented by various subjects themselves.

Regional Geographical Learning Based on a New Concept of Region

In recent geographical studies, the concept of a region has been considered a socially-constructed product (Paasi, 2020). The idea that a region is not a physical surface space, but something formed through social communication (physical contact, mass media, political, and cultural events) has gained acceptance (Morikawa, 2004, pp. 149-161). In educational research, a social constructivist approach to social studies has been proposed, which aims to allow students to analyze, examine, and reconstruct the constructedness of discourses and social events from multiple perspectives and viewpoints (Tamoto & Sanaga, 2015). Meanwhile, to avoid knowledge relativism, the validity of "powerful knowledge" theory based on the social realist view of knowledge has also been argued (Young, 2017; Shimura, 2018).

Based on the results of these geographical and pedagogical studies, Oya (2023) proposed the Social Construction-Reconstructive Regional Geographical Learning, which aims to reconstruct regional representations by critically examining and investigating the process of construction and validity of regional representations while using and acquiring geographical concepts. In this learning theory, regional representations are socially constructed, and children can improve them through discussion. Children's mastery of geographical

concepts is useful for avoiding the harmful effects of stereotyping, fixation, standardization, and simplification. The use of geographical concepts challenges the validity of stereotypical regional representations. This can be applied to regional geographical learning in elementary social studies based on an expanding environmental approach, allowing children to reconstruct stereotypical representations of the region or country in which they live.

Stereotyping is a natural mental response in humans. In recent years, it has become clear that unconscious intuitional biases strongly influence a large part of human decision-making (Kahneman, 2011/2014). Oji (2018) developed a learning method for social decision-making that ensures rationality and logic while controlling the influence of intuitive biases. Regarding stereotypes, it is necessary to structure lessons that consider the tendency of human mental reactions and the process of stereotype formation. However, specific strategies for avoiding the harmful effects of stereotyping have not yet been developed. Based on the findings of social psychology, in which research on stereotypes has accumulated, this paper discusses methods of stereotype avoidance that considers the characteristics of stereotypes and their formation processes.

Constitutive Principles of Regional Geographical Learning to Avoid Stereotyping

Stereotyping from the Perspective of the Cognitive Process Model

How can we avoid stereotyping in regional geographical learning? Social psychological research has investigated strategies for avoiding stereotyping. Although humans are prone to stereotyping based on categorization, it is believed that they process individual cases when necessary. The validity of two main models of such cognitive processing processes has been suggested (Kamise, 2002; Matsui & Kamise, 2007; Shiomura, 2016). The first is Brewer's (1988) "dual-processing model of interpersonal cognition." In this model, when we do not need to know much about the other person before us, we automatically apply categories to our judgments ("category-based mode"). When we need to know more about the other person, we make individual judgments that are not based on stereotypes (the "individual-based mode"). The second is the Fiske and Newberg (1990) "continuum model." In this model, when judging others, we first place them in a social category. If another person is important or of special interest, we should pay attention to their attributes and characteristics and make detailed judgments.

These arguments suggest that to avoid stereotyping, we need to stop judging by categories, turn our attention to the individual person, and look at the person in terms of unique characteristics rather than categories.

Strategies to Avoid the Harmful Effects of Categorization

What strategies can we use to avoid stereotyping? Kamise (2002) and Matsui and Kamise (2007, pp. 68-71) suggest that the following four points are effective in promoting the transformation of categorization. The first is decategorization, which implies that the categories used to judge others become less meaningful and less used. This occurs when personalized contact increases exposure to information that contradicts stereotypes. The second is recategorization, which is the formation of a new category of higher categories that encompasses each group. By categorizing people, including themselves and those they stereotype, based on common purposes and criteria, the previous categories disappear, and a higher category is formed that includes all people. The third category is subcategorization, which means that each category contributes separately to a common goal in a complementary manner. The assumption of one's own role as the ultimate common goal, while maintaining each category, maintains a positive differentiation within the cooperative relationship. The fourth category is the cross-cutting categorization, which makes people aware of another category, or assigns another role to a category

in a manner that breaks it up. This can reduce the manifestations (prominence) of the category in question.

Based on the above findings, perspectives for avoiding stereotyping in regional geographical learning can be summarized as follows:

The first is to apply decategorization based on the interpersonal cognitive processing process to the region. The child's motivation and purpose to learn about other things in the community and grasp its diversity beyond the case study area allows existing categories to become meaningless. The second is to perform a recategorization that considers the different places in the region as subcategories and devises a higher category that encompasses them. It is important to fully recognize the existence of these subcategories. The third is that the recategorization performs a cross-cutting categorization simultaneously. Recategorization allows for different perspectives on the region and the creation of a variety of new categories.

By incorporating a perspective that avoids stereotyping into the lesson structure, it is possible to relativize stereotypical regional representations and reconstruct them into new regional representations.

Strategies for Avoiding Restereotyping

However, if regional representations are recategorized, this can lead to new stereotyping. For this reason, it is also necessary for children to learn about the limitations of the regional representation they have formed after their studies, and to acquire knowledge and skills that will prevent stereotyping. Therefore, this paper identifies the points that geographers and area studies researchers should consider when describing and representing an area based on field studies. These findings can be incorporated into strategies to prevent recategorization from becoming a new stereotyping.

Recent research in human geography has demonstrated that specific representations of places are constructed in specific social contexts. In particular, it has raised questions as to who creates ways of interpreting the meaning of particular landscapes and places, making them natural and self-evident, and even controlling or exclusive (Mori, 2021, pp. 71-72). These academic trends have also influenced area studies, which have come to view the differences in the way geographies are depicted according to position in terms of power relations and reflect on one's own descriptions. For example, Konagaya (2000) pointed out that, regardless of how rich regional representation becomes, the subjectivity that exists on the drawing side cannot be completely eliminated, and it is necessary to reduce unnecessary filters of interpretation as much as possible in the description of regional representation. Kumagai (2019) also notes the importance of being aware of the "positionality" of those who describe geographies. With Said's othering in mind, he argues that we should focus on the power structure itself, in which survey researchers in developed countries unilaterally represent "marginal" people and area studies. Kondo et al. (2022) note that the way geographies are represented takes a variety of approaches depending on the intention and background of the author trying to represent them and is largely related to the subjectivity of the author. In the context of geography education, Roberts (2013) builds on Massey's (1995) statement that "each representation (each geographical imagination) necessarily has a particular perspective," suggesting that children are aware of the lens through which they investigate and describe the world, and that what they learn in geographical learning is not the world itself. Therefore, to reconstruct regional representations during the recategorization phase, children need to acquire the ability to metarecognize the limitations of the regional representations they and others have created.

Lesson Structure to Avoid Stereotyping

Based on the above discussion, lessons to prevent the formation of stereotypical regional representations should

incorporate strategies to avoid stereotyping and establish learning situations that make students aware of the limitations of regional geographical learning. Specifically, the following perspectives should be considered:

- (i) Consciousness of stereotyping: Make students' stereotypical regional representations of Region A obvious.
- (ii) Decategorization: Make the students aware that the existing stereotypical regional representation is not adequate to represent reality by drawing their attention to or examining in detail the diversity (place a, b, c, d, e...) found within Region A.
- (iii) Recategorization: Have the students produce categories that encompass the different places (a, b, c, d, e...) in Region A.
- (iv) Cross-cutting categorization: In (iii), the perception that "place a is an exception" (subtyping) may arise. To avoid this, understanding each place through geographical concepts, such as place, space, and scale, makes people realize that places within a region (a, b, c, d, e, etc.) have something in common. We also enable children to combine geographical concepts to form diverse regional representations.
- (v) Metacognition of recategorization: Make the students aware of the explanatory limitations of the regional representation they have formed, so that the recategorized regional representation does not become stereotyped again.

A Lesson Model for Regional Geographical Learning That Reconstructs Stereotypical Regional Representations

Effectiveness of the Jigsaw Learning Method

Much of the research on stereotypes in social psychology has been accumulated through studies on cooperative learning. In particular, the jigsaw learning method, developed in the 1970s by a research group led by social psychologist Elliot Aronson, has been evaluated as an effective way to create contact situations to reduce stereotypes (Kamise, 2002, p. 124). This learning method, which allows children to work in groups in situations of positive interdependence, was originally based on efforts to reduce racial prejudice (Matsui & Kamise, 2009, p. 72). It is now recognized as a learning method that categorizes children into small learning groups, within which each child creates a relationship of mutual teaching as a teaching expert (Tajiri, 2020). This can create a process and structure in which children trust each other as sources of information. Consequently, the jigsaw learning method inevitably leads to paying attention to each other, as their actions and achievements are related to their own learning outcomes. This avoids stereotyping and facilitates information processing, in which the other person is not seen as a category but as a person corresponding to each case (Kamise, 2002, pp. 136-138).

Applying the above points to regional geographical learning, the jigsaw learning method of geographical learning is effective in avoiding stereotypes. There are three reasons for this finding. First, expert activities in which each place in the region is assigned to a different area can help students recognize the diversity within the region and the equality among places and can promote decategorization. Second, the interdependence in the jigsaw activity leads to an understanding of the characteristics of each place and motivates participants to recategorize by using them. Third, by setting questions using geographical concepts in expert activities, the region can be captured using multiple geographical concepts during jigsaw activities to promote cross-cutting categorization.

Incorporating jigsaw learning method is useful for examining the learning process of reconstructing stereotypical regional representations.

Using the Knowledge Constructive Jigsaw Method

However, the jigsaw learning method proposed by Aronson et al. has its problems. This learning method aims to help learners acquire the skills needed to build collaborative relationships and communications. However, it does not guarantee sufficient learning opportunities for each individual to change their own ideas (Shirouzu, 2020, pp. 61-62). To realize the purpose of this study, it is necessary to guarantee that learning changes each person's perception of the area and deepens their view of the region.

Therefore, the Knowledge Constructive Jigsaw method, based on Aronson et al.'s jigsaw learning method, was used in this study. It is a teaching method for inducing collaborative learning developed and proposed by the Consortium for Renovating Education of the Future (CoREF) at the University of Tokyo. This method aims to change school practice from an old teacher-centered pedagogical approach to a learner-centered approach and to co-create collaborative learning (Miyake & Kershner, 2016). The central principle of this teaching method is the idea of "Constructive interaction" (Miyake, 2011). "Constructive interaction" refers to the transformation of knowledge in a direction that can be called "constructive" in terms of how participants think about the common "question" before and after their participation. Here, "constructive" means that each person's solution to and understanding of the problem is more advanced at the end of the interaction than at the beginning (Miyake & Shirouzu, 2018). By incorporating this teaching process, which encourages constructive interaction into Aronson et al.'s jigsaw learning method, the goal is to deepen the solution in the learner's own way and create new knowledge through collaborative comparison, overview, and integration of knowledge (Masukawa & Ozawa, 2016). The details of the learning process consisted of the five steps listed in Table 1. This learning method adds Steps 1, 4, and 5 that are not included in the traditional jigsaw learning method.

Table 1. Learning process of the Knowledge Constructive Jigsaw method

Step	Learning activity
Step1 Have own ideas about the unit's question	Each child expresses their own ideas about the unit's problems set by the teacher. •The teacher makes them aware of what they know. •It is important that the questions posed by the teacher are questions that "cannot be answered adequately by one person."
Step2 Expert activities	Become an "expert" in knowledge divided into parts through expert activities. •The teacher prepares answers to the question from different perspectives. •The children are divided into small groups to learn about each component.
Step3 Jigsaw activities	Share and integrate each other's knowledge in a jigsaw activity. •The group is rearranged to form groups of members who discussed different parts in the expert activity. In this way, the members who have shared their ideas about different parts create an answer to the first "question" that cannot be sufficiently answered by one person alone. •The members of the group then create a situation in which they are the only ones who know the "parts of the answer."
Step4 Crosstalk	Crosstalk and find expressions for the question. •Share the ideas that each group has developed in the jigsaw activity with the whole class. •Students have a chance to deepen their understanding by listening to the other groups' solutions and saying "I agree with that way of thinking" or "I see, that's a good way of thinking about it."
Step5 Have own thoughts again about the unit's question	Again, each child expresses their own ideas about the unit's problems set by the teacher. • Integrate in your own way what you have thought about through the series of studies and express it again in your own words.

Shirouzu et al. (2020) adapted by author.

By incorporating these steps into regional geographical learning that avoids stereotyping, children can learn to change their concept of regional representation, in addition to the effectiveness of the traditional jigsaw learning method. Specifically, children can compare their own ideas with others, look at the whole picture, and integrate different ideas through dialogue based on each individual's perception of the region. Additionally, through jigsaw activities and crosstalk, students can experience the social creation of regional representations through language. Through these learning activities, children will understand that regional representation is not fixed, but changes depending on one's position, has gaps, and is arbitrary.

However, the standard Knowledge Constructive Jigsaw method may not fully realize the lesson principles presented in this study. Therefore, it is necessary to modify the following three points:

The first is the number of class periods in which Steps 1–5 are incorporated. In the standard Knowledge Constructive Jigsaw method, many practitioners implement all learning activities from Steps 1–5 in a single class period. However, given the developmental stage of elementary school students, achieving sufficient conceptual change in one class period is difficult. To promote children's conceptual change, it is necessary to spend several hours during the unit to conduct learning activities from Steps 2–4. Steps 1–5 should be conducted at the introduction and end of the unit, respectively, to ensure that children have many opportunities to grasp the transformation of their own image of the region.

The second is the number of components that answered the central question. In the standard Knowledge Constructive Jigsaw method, three or four components are prepared for a given question and jigsaw groups are often formed with the same number of students. However, in this case, the children's regional representation is greatly influenced by the intentions of the teacher who prepared the materials. To minimize the influence of teachers' regional interpretations, it is desirable to prepare a large number of components for the number of participants and allow children to choose freely according to their interests and concerns. In principle, there is no single absolute answer to the question, "What is Region A like?" It is important to select as many unique places in the region as possible at the component-setting stage so that a broad regional representation can be formed through children's dialogues.

The third is the content of expert materials. In the standard Knowledge Constructive Jigsaw method, children cannot understand the teacher's interpretation of each material item. Therefore, children are forced to read materials without understanding why they must think based on such content (Watanabe, 2023). To avoid this challenge, teachers should first create materials for each place by clarifying questions based on geographical concepts such as place, space, and scale. If it is not developmentally challenging, explain to the child the geographical concepts on which the material in question is based. Oya (2023) proposed "Social Construction-Reconstructive Regional Geographical Learning," in which geographical concepts are acquired and developed, and regional representations are reconstructed using these concepts. This learning theory uses the three geographical concepts of place, space, and scale to create a regional representation. By creating materials that clarify questions based on these geographical concepts or by making children aware of them, it is possible to understand the teacher's intention in creating materials.

Lesson Model

Based on the above, a lesson model for teaching regional geography to elementary school students was developed using the results of social psychology and area studies and the Knowledge Constructive Jigsaw method in conjunction with the Social Construction-Reconstructive Regional Geographical Learning of Oya

(2023). Figure 1 illustrates the lesson process. In addition, it shows the correspondence between the findings of social psychology and the Knowledge Constructive Jigsaw method.

The first stage is the analysis of the construction of regional representation. At this stage, stereotypical regional representations are revealed. First, ask “What is Region A like?” and let the children express their own regional representations. This is Step 1 in the Knowledge Constructive Jigsaw method. Next, the children were asked to take up the regional representations they have in common, which are reported in various media, and to grasp the stereotyped regional representation of Region A. They are then asked to take a place (a) that represents the stereotyped regional representation and analyze why it has such characteristics. The aim is for children to recognize the stereotyped regional representations and grasp the reality of the region in line with these stereotypes.

The second stage involves relativizing regional representation. The aim is to create a consciousness of stereotyping and the decategorization of stereotyped regional representations. The child recognizes that there are different places (b), (c), (d), and (e) in Region A other than (a), and that the stereotyped regional representation of Region A does not represent the characteristics of places other than (a).

The third stage examines and criticizes regional representation. The aim here is to encourage cross-cutting categorization and recategorization of stereotypes. Through expert and jigsaw activities, the participants were asked to examine the validity of the existing categories to see if they corresponded to reality and to gain a perspective for recategorization. First, each member of the jigsaw group chooses one of places (b), (c), (d), (e), or (f) in Region A according to their own interests. These places are the characteristic areas of Region A selected by the teacher. By preparing more places than the number of members, each group can propose various images of the area through a jigsaw activity. Next, the children were divided into expert groups to investigate each place and acquire knowledge about it based on the materials. The teacher prepares materials to answer inquiry questions based on geographical concepts, such as “place,” “space,” and “scale,” so that cross-cutting categorization based on geographical concepts can occur in subsequent activities. In a subsequent jigsaw activity, students are asked to bring their knowledge of each place to bear and collaboratively examine the characteristics of Region A. By assigning equal weights to each of the places they have studied, it is believed that this will lead to a fair understanding of the diversity within Region A. Finally, students present their answers to the jigsaw activity in a whole-class crosstalk session and learn from each other about the regional representation of Region A created by each group.

The fourth stage is the reconstruction of regional representation. Here, the goal is to recategorize and metacognition the recategorization of individual regional representations. This is Step 5 of the Knowledge Constructive Jigsaw method. Based on what they have learned thus far, the students were asked to produce their own answers regarding the kind of place Region A is. Having students think of a higher-level category that encompasses different places in Region A (a, b, c, d, e, f) leads to the reconstruction of a new regional representation of Region A. Furthermore, they are made aware of the limitations and biases of the reclassified regional representation, so that it does not become stereotyped again.

Such a lesson structure allows students to engage in regional geographical learning, which challenges stereotypical regional representation.

As a case study, this section presents a specific teaching process using Shinjuku ward, Tokyo, where the author’s school is located. Shinjuku is a special ward in Tokyo. In social studies in the third grade of elementary schools in Japan, there is a unit in which students learn about the regional characteristics of the administrative

district in which the school is located. Shinjuku has a district with skyscrapers over 200 m high and is the main downtown area in Tokyo. For this reason, regional representations such as “a bustling town with commercial facilities and entertainment districts” and “a noisy town with many crowds” have been repeatedly presented through media such as guidebooks, TV, the Internet, and social networking services. In image searches on the Internet, pictures that match the above images are displayed at the top of the list. Despite the fact that there are various areas with different regional characteristics within Shinjuku (b-f in Figure 1), only one-dimensional regional representations of Shinjuku have been featured in various media. This stereotyped regional representation could be reconstructed using the lesson model (see Figure 1).

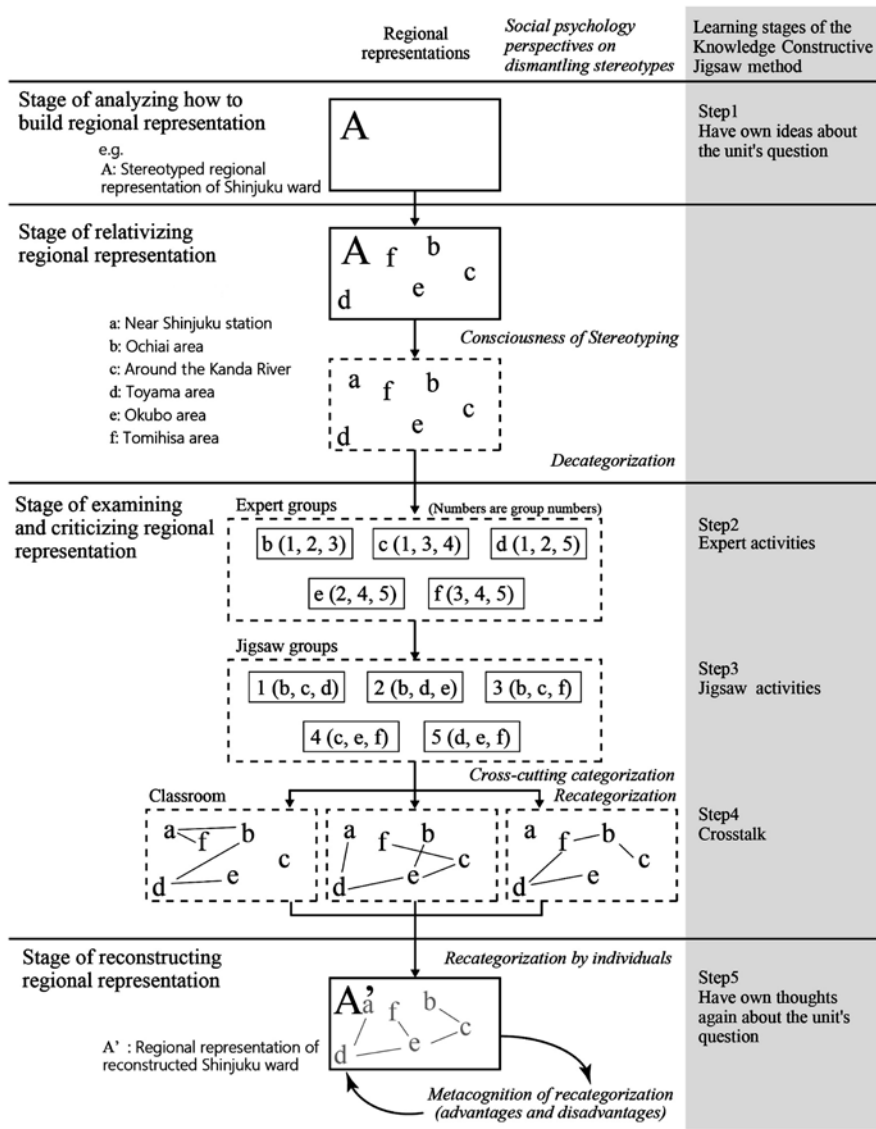


Figure1. Lesson-process model for reconstructing stereotypical regional representation

Created by author.

First, the unit's central question was "What is Shinjuku ward like?" and the children were asked to express the regional representation of Shinjuku that they had in common. In addition, using tourist guidebooks, the Internet, and other sources allowed students to grasp the stereotypical image of Shinjuku that was shared by society in general. Next, the students took up an area (the area around Shinjuku Station, where commercial facilities are concentrated) that matched the stereotypical regional representation and analyzed why it was an area where many people congregate. The goal was to understand the components of the stereotypical area and how the area was formed.

Second, students would understand that the regional representation discussed in the previous stage was a stereotypical regional representation of Shinjuku, as it only covered a part of the ward. Using maps, land use maps, and other materials, the students would examine the characteristics of Shinjuku as a whole and understand that some areas had the same characteristics as the area around Shinjuku Station, while other areas did not. In doing so, students would be able to relativize the stereotypical regional representation of Shinjuku and understand that there were a variety of areas within Shinjuku that could not be captured by stereotypical images. This would promote the awareness of stereotyping and decategorization of regional representation in the Shinjuku.

Third, we considered the image of the Shinjuku ward that could change its stereotypical regional representation of Shinjuku. To begin with, each jigsaw group of three people selected three of the five areas in Shinjuku (Ochiai, around the Kanda River, Toyama, Okubo, and Tomihisa) and conducted an expert activity to learn about the regional characteristics of each area. The worksheets used in the expert groups contained questions based on geographical concepts related to either "place," "space," or "scale" (Table 2). Based on these questions, the children worked in groups to explore. Through expert activities, children acquired not only factual knowledge of the area, but also a perspective on the region based on geographical concepts. Next, the children formed jigsaw groups and discussed how to reconstruct the image of Shinjuku based on the knowledge of the three areas obtained through expert activities. The group members communicated their knowledge of the areas they were in charge of and gained through expert activities to their counterparts and learn from the knowledge gained by others. The children in the group integrated their knowledge of the three areas and discussed the answer to the question, "What is Shinjuku ward like?" The jigsaw group activity not only consolidated the knowledge of each area, but also allowed the children to pluralize their views of the area and to consider regional characteristics. For example, in the Ochiai area, the question was set up with "place" as the central geographical concept, and around the Kanda River, "space" as the central geographical concept. By learning each other's regional characteristics based on each geographical concept, children could discover a new regional representation of Shinjuku. Finally, based on the discussion's results, the entire class must engage in a crosstalk session. The regional representations presented by each group differed from each other. The students would realize that these differences were the result of differences in regional components and that there was more than one regional representation of Shinjuku. This process would promote the recategorization and cross-cutting categorization of the representation of Shinjuku.

Fourth, based on previous study activities and the children's own image of Shinjuku, each individual recategorized their own regional representation of the ward. This was recategorization by individuals. Each child focused on a different element of the community. By using a perspective based on geographical concepts, the children themselves could present a regional representation of the Shinjuku ward that was not based on

Table 2. Composition of materials for expert activities

Groups	Study Contents	Questions (Geographical concepts)	Materials
b Ochiai area	In the Ochiai area, there are many residential areas that are rich in nature and quiet. As a result, Shinjuku ward can be said to be “a very comfortable place to live.”	What kind of town is Ochiai area? Q1 What kind of scenery can you see in Ochiai area? (place) Q2 What kind of place was the residential area of Ochiai considered to be? (place) Q3 What kind of place is Ochiai area for residents? (place)	Photographs of residential areas Historical materials Painters' drawings Residents' stories Distribution of green areas News videos
c Around the Kanda River	In the Kanda River area, there are many printing, publishing, and dyeing factories that use the water of the Kanda River. Therefore, Shinjuku ward can be said to be “a city where manufacturing is very active.”	What kind of town is the area near the Kanda River? Q1 What are the characteristics of the way land is used near the Kanda River? (space) Q2 What are factories making and how? (space) Q3 Why are there so many factories of dyeing and printing near the Kanda River? (space)	Photographs of factory districts Distribution of dyeing and printing factories Work contents Reasons for factory location Video materials
d Toyama area	In the Toyama area, the population is aging, and measures are being taken to address this issue. As a result, Shinjuku ward can be said to be a “senior-friendly city.”	What kind of town is Toyama area? Q1 What kind of land is used in Toyama area? (space) Q2 What kind of special features are there in Toyama's housing complexes? (place) Q3 What kind of efforts are being made in the shopping district in the residential complex in Toyama area? (place)	Maps & Photos Residents' stories Municipal measures for the elderly Video materials
e Okubo area	In the Okubo area, there are many foreign residents and commercial facilities for foreign residents in Japan. Therefore, Shinjuku ward can be said to be a “city connected to the world.”	What kind of town is Okubo area? Q1 What kind of scenery can you see in Okubo area? (place) Q2 How many foreigners live in Okubo area? Why do they live in Shinjuku ward? (scale) Q3 Why did they open a restaurant in Okubo area that sells foreign food and other things? (scale)	Photographs of Shopping District Scenery Number of foreign residents by nationality Purpose of coming to Japan Stories about people working in stores News videos
f Tomihisa area	In the Tomihisa area, old buildings are being renovated and new facilities and buildings are being constructed for redevelopment. As a result, Shinjuku ward can be described as a “city in the process of redevelopment.”	What kind of town is Tomihisa area? Q1 How has Tomihisa area changed in 20 years? (space) Q2 Why was a house built on the roof of a supermarket? (space) Q3 Are there places in Shinjuku ward that will be redeveloped like Tomihisa area? (scale)	Old and new landscape photos Residents' Stories Shinjuku ward's redevelopment plan News videos related to redevelopment

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stereotypes. In doing so, they must be made aware of the limitations and biases in their own reconstructed regional representation so that the reconstructed image did not become stereotyped again. This was the metacognition of recategorization. Finally, by comparing their own regional representation of Shinjuku at the beginning and end of the unit, the children were able to capture the transformation that had occurred as a result of their own learning.

Conclusion

This study proposes a lesson model for elementary social studies on regional geographical learning that reconstructs stereotypical regional representations based on previous stereotype studies. The results of the study are as follows:

First, the findings and problems in previous geography education research on stereotypes were clarified. Stereotypes about one's own region or country are not addressed, and there has been the problem of uncritical acceptance of the teacher's regional representations when learning about one's own region or country. In order to improve this problem, it was shown that "Social Construction-Reconstructive Regional Geographical Learning" (Oya, 2023), which views a region as a socially-produced construct, examines and criticizes it, and aims to reconstruct regional representation and create new regional images, is effective.

Second, based on the results of social psychology and area studies, a lesson structure perspective that can counter stereotypes was identified. It became clear that lesson design should incorporate five strategies for reconstructing stereotyped regional representations (consciousness of stereotyping, decategorization, recategorization, cross-cutting categorization, and metacognition of recategorization).

Third, a lesson model for regional geographical learning that reconstructs stereotypical regional representations was developed using the Knowledge Constructive Jigsaw method. By incorporating the learning activities of the Knowledge Constructive Jigsaw method into the lesson process of the Social Construction-Reconstructive Regional Geographical Learning, a lesson model was developed to relativize stereotypes and reconstruct them into new regional representations through collaborative learning based on dialogue.

The next task is to develop specific lesson plans and qualitatively clarify their effectiveness based on classroom practice.

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