

Development of an evaluation method of thinking, judgment, and power of expression in social studies education:

Incorporating the research results on logic, analytic philosophy, sociology, cognitive psychology, and the situation of the class room

1. Purpose and Overview of the Survey and Research

(1) Purpose of the Survey and Research

This research seeks to develop a method to evaluate "thinking and judgment" with clarity in social studies education when there are no clear criteria for what aspects of "thinking and judgment" should be assessed.

(2) Overview of the Survey and Research

(i) Explain "thinking" in social studies class.

In order to explain what "thinking" means in social studies class, we consider achievements of previous studies in the fields of logic, analytical philosophy, sociology and cognitive psychology.

(ii) Develop a method to evaluate revealed "thinking".

Because of the significance of "power of expression" when "thinking", we develop an evaluation method to be used in class by letting children "express" the process of "thinking".

(iii) Develop questions for evaluation based on the shown "thinking" process.

[Study period: FY 2012- FY 20123, Leader: KOMEDA Yutaka (Professor, Graduate School of Hyogo University of Teacher Education)]

2. Outline of Research Results

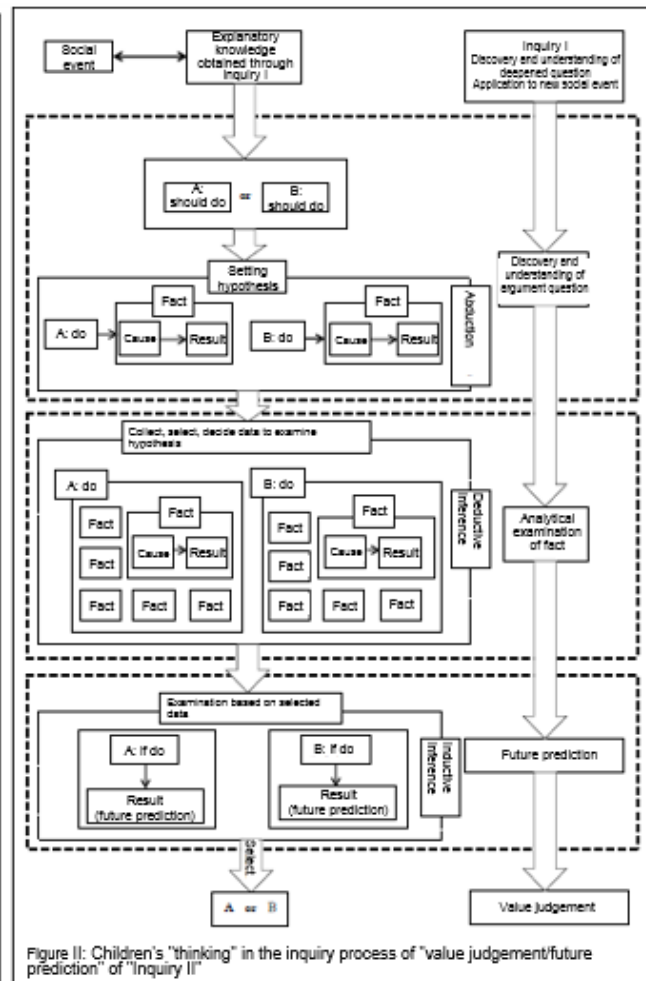
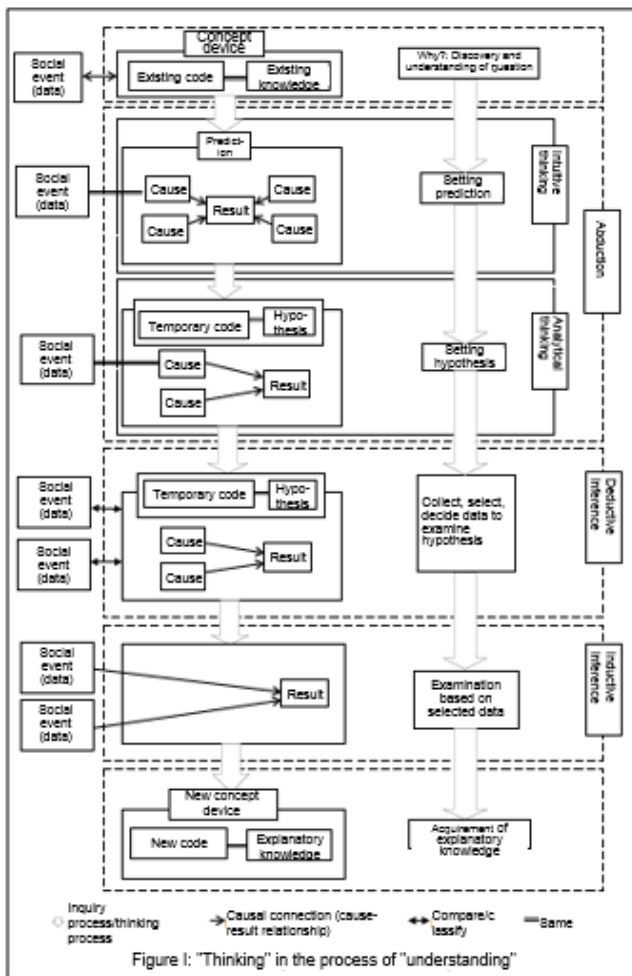
(1) What is "thinking" in social studies?

(i) Structure of "thinking" in the process of "understanding" in social studies

The study revealed that "thinking" in the process of "understanding" in social studies was an act that works at all times as a process, not the one that works in a fragmentary fashion at each point of the whole process. "Thinking" means to follow a process: generating hypothesis/hypotheses through abduction in a study, selecting case(s) explaining the hypothesis/hypotheses with deductive inference, and verifying the selected case(s) through inductive inference. (Figure I on the next page)

(2) Structure of "thinking" in the process of "consideration" (value judgment/future prediction) in social studies

It was discovered that "thinking" in the process of "consideration" experiences "discovery of argument issue(s)", "analytical review of facts", "future prediction" and "value judgment". Argument issue(s) is/are discovered and figured out by thinking about social events based on knowledge acquired in the process of "understanding". Facts necessary for exploring controversial issue(s) are then analyzed. The facts need to have a scientific basis. That is, causal dependence is analyzed at this point. Analysis of facts is repeatedly carried out according to the judgment axis to judge values. Based on the facts, the future is predicted. In the end, one or some of the values derived is/are selected. (Figure II on the next page)



(2) Development of class and evaluation of "thinking" based on the structure of "consideration" in social studies

(i) Evaluation in class

Referring to "*Watashitachi no Shokuseikatsu to Shokuryo Seisan* (Our Diet and Food Production)", we developed a class into which the "cognitive map" was integrated. Graphical representation of a concept as a "cognitive map" enables us to see concepts previously formed. By repeating that, descriptive knowledge changed into explanatory knowledge, and students were eventually able to acquire conceptual knowledge about agriculture in Japan. The figure shows how students were able to form a concept. Students form the "cognitive map" by combining a range of elements. In other words, the integration of the "cognitive map" allows us to see the process of concept formation, enabling us to evaluate "thinking". (Figure III on the next page)

(2) Evaluation in evaluation problems

"Thinking" was successfully evaluated using evaluation problems by including problems inquiring about the "thinking" process (i.e., how students used data and came to the solutions of problems) into evaluation problems. By indicating the method of "thinking", we figured out how teachers should let children use data

and what kind of questions should be included in problems in order to evaluate "thinking". It was also found that this helps the improvement of classes and evaluations.

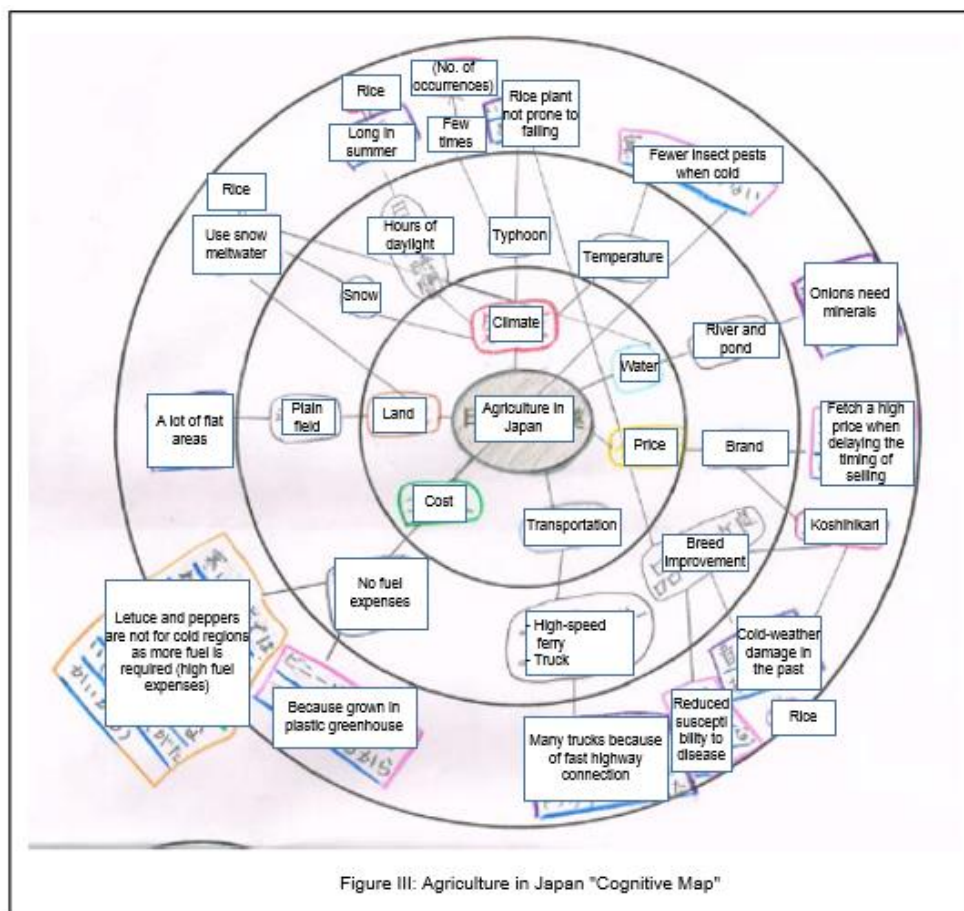


Figure III: Agriculture in Japan "Cognitive Map"

(3) Research results

There exist some problems with evaluation of "thinking" in social studies at schools in terms of clarity. Nevertheless, the significance of "thinking" has been growing in social studies. Under such circumstances, confusion in the places of education will remain, impeding the formation of children's social recognition and the development of their qualities as citizens. This research has been seeking for solutions for the above challenges.

There are two major achievements after two years of studying. First is that "thinking" in social studies was clarified. Second is that we were able to propose to carry out evaluation through evaluation problems as a way to evaluate "thinking" in social studies.

(4) Publishing of research results

We held a roundtable at the 25th meeting of the Education in the Social Studies Department Research Association with the purpose of presenting the results of our research. Although we prepared 100 copies of the handouts assuming the roundtable would be a small-sized meeting, the number of attendees was more than we expected, and we ran short of the handouts. This means that interest in evaluation of "thinking" is high among researchers and people engaging in practices.

A number of researchers and people engaging in practices in the field of social education gathered at the roundtable from all over the country. The roundtable was a suitable place to present the results of this research project. People involved in the research project also presented their views based on the research results so far. Most of all, that not only people involved in the research but also people engaging in practices in the places of education expressed a range of views at the roundtable made it possible to publish the results of this research more widely.