

The Value of Studying Words and Deep Thinking Using Semantic Maps in a Japanese Reading Class

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Abstract

The main purpose of this study is to examine the effects, specifically positive effects, of creating semantic maps in small groups. Included in this examination are the features of semantic map-making that enable positive effects on Japanese middle-school students who are having difficulties in understanding Japanese literary texts. To address these issues, this article explains how students deepen their understanding of the texts through the creation of semantic maps. According to the research, the students were able to receive different types of assistance from peers and teachers through semantic map-making. As a result, students could read literary texts using all four levels of thinking and learn word meanings beyond their dictionary definitions. Moreover, from the viewpoint of values education, semantic map-making (along with other techniques) could function as a tool for understanding others with different opinions.

Introduction

The MEXT has set five goals for Japanese language instruction (Ukida, 2010:369):

1. To develop the ability to fully express one's thoughts and to understand others' thoughts in Japanese
2. To improve communication skills
3. To develop the ability to think and imagine
4. To improve a sense of language
5. To deepen interest in the Japanese language and nurture an attitude of respect for the Japanese language

This study is based on the first and third goal above. The reason to focus on goal 1 is that when one is interpreting literary texts, there is no correct answer, just like with many problems in the real world; thus, it is important to understand that there are multiple answers or opinions. Likewise, goal 3 should be focused on in order to develop student's individualistic thinking and imagination when reading literature by going beyond what's written in a textbook. By doing so, they will have the ability to cooperate with others and solve potential problems they may face in the future.

To achieve these goals, this study incorporated semantic map-making into a Japanese reading class. Semantic maps are also called “webbing,” “concept maps,” or “mind maps.” The goal is to let students visualise text information by connecting words with links (see Figure. 1). In other words, students transform text information into graphical information.



Figure 1: Sample semantic map created by students

The reason for incorporating semantic map-making is that it changes a traditional Japanese class, which would be typically be taught by “mass teaching” (Yamaguchi, 2010:349). In Japan, school education law requires Japanese classes to use textbooks approved by MEXT. For this reason, most students in Japanese classes have few opportunities to participate in discussions with other students. For example the following instruction, is a typical activity in a Japanese class (Katsuta and Iida, 2014):

1. The teacher sets learning goals to improve the students' literary reading skills. Students are taught to integrate information from two different texts.
2. The students read literary texts in textbooks and supplementary materials such as authors' biographies.
3. Students write an essay about what they have read.
4. Students present what they have written to the whole class.

There is a problem with this type of lessons. If students can read literary texts by themselves and understand reading skills immediately after the teacher's explanation, then this teaching style is effective. However, some students cannot understand textbooks by themselves. Those students will need more guidance or discussion with other students. However, traditional Japanese classes tend to have limited interaction between teacher and students, and much less interaction amongst the students.

There are hypothetically two advantages of semantic map-making. First, group semantic map-making fosters discussion on the theme of the story, the setting, the plot, and the characters. Second, semantic map-making makes it easier for teachers to help students, because it allows the students to create a record of their literary understanding.

The purpose of this article is to prove these hypotheses. In particular, I focused on one student who is not good at reading and writing to describe how he gained a deeper understanding of literary texts using semantic map-making. In addition, this article also describes how he had learned word meanings beyond their dictionary definitions, as well as how his beliefs changed.

Research Methodology

Overview of the Japanese Lesson Used in the Study

The lesson for this study has 11 sessions (one session = 50 minutes). The students read two literary texts. One is "My Old Home" (Xun, 1921 and 2009) in the textbook, which most Japanese students read in junior-high school. This short story examines the narrator's hope that Chinese society will become better in the future. The other one is "Mr. Fujino" (Xun, 1926 and 1956), written by the same author and covering a similar theme, but it is not in the textbook. Table 4 shows the main activities of this lesson.

Table 4: Main Lesson Activities	
"My Old Home"	"Mr. Fujino"
1. Read the story.	6. Read the story.
2. Write an essay about it.	7. Write an essay about it.
3. Make a semantic map of the story individually.	8. Make a semantic map of the story individually.
4. Make a semantic map of the same story with peers.	9. Make a semantic map of the same story with peers.
5. Rewrite your essay using the information from both semantic maps.	10. Rewrite your essay for "My Old Home" to include "Mr. Fujino" using all of the semantic maps.

A Focus on Group and Students

The lesson I observed focused on a small group, which included Koda, Hada, Saeki, Miyoshi, and Sato (all students' names are pseudonyms). Koda has strong reading, writing, and leadership skills, and scored perfectly on his national standardised test. Students in Koda's group usually consulted him when they had difficulties in understanding tasks or lectures, and asked him to present their semantic maps to the whole class. Hada has average reading and writing skills. Saeki and Miyoshi have the lowest reading and writing skills and rarely participated in group work. Therefore, they did not contribute enough to group work. Although Sato's reading and writing skills are also below-average, he participated actively in class; the number of Sato's utterances was the highest in the small group. For this reason, this research will focus on Sato.

Research Data Collection and Analysis

Every student's written response to the literary texts (essays and semantic maps), along with Sato's interactions with other students and the teacher were gathered for analysis. Students' essays were analysed and grouped into four levels of thinking (see Table 5). The protocols of Sato's interactions with others were coded by two researchers to identify the types of assistance he received from others.

Level of Thinking	Definition
Factual level	Involved with memory and recall of information from text
Interpretative level	Involved with drawing inferences about and reorganising text
Applicative level	Involved with integrating text with prior knowledge
Transactive level	Involved with affectively responding to text

Source: Ruddell, 2009:125–126

Research Results and Findings

The results of the data analysis showed that Sato had a better understanding of the two literary texts after using semantic map-making activities.

Analysis of Sato's Essays Before and After Semantic Map-Making

In the first essay, Sato did not understand any of content of “My Old Home.” He simply wrote, “the sentences are too long. I don't understand the meaning of the texts.” After the teacher encouraged him to elaborate, Sato added some text and showed that he understood the basic meaning of the story such as the fact that it was set in China. However, Sato only used the factual level of thinking. After Sato made a semantic map about “My Old Home” in his group (see Figure 2), his understanding of the story improved. For example, he mentioned a metaphor in his second essay on “My Old Home”: “I think that the cold weather and the leaden sky represented the narrator's depression.” That means he made inferences about the story's meaning beyond the literal meaning of the text (the interpretative level of thinking). In addition, he integrated the story's theme into his prior knowledge: “I think ‘hope’ is just like a path, so we have to make one for ourselves.” That is, he used the applicative level of thinking after the semantic map-making activities.



Figure 2: Sato's group's semantic map of “My Old Home”

Furthermore, in the essay he wrote in the last session, he connected the story more directly to his own life (the transactive level of thinking):

“ Mr. Fujino hopes Lu Xun could bring modern medical science back to China and develop it. Such an act will require a lot of effort. I think ‘hope’ is just like a path. We make one for ourselves and this requires effort. It takes effort to be smart so I’ll try my best. We can do anything if we try hard so I’ll try my best. ”

In other words, in the end, he used all four levels of thinking to understand “My Old Home” and “Mr. Fujino.” Although his final essay was not as good as that of his peers, the progress Sato made was beyond everyone's expectation.

Analysis of Sato's Interactions with His Peers and the Teacher During the Semantic Map-Making

Based on his essays, we saw that Sato deepened his understanding as the lessons proceeded. The results of coding the protocols of Sato's interactions with his teacher and other group members showed that Sato received eleven different types of assistance in two categories— affective and cognitive (see Table 6).

Table 6: Types of Assistance That Sato Received

Affective Assistance	Cognitive Assistance
<p>I-A. Facilitating on-task behaviour</p> <p>The teacher and his group mates encouraged him to keep doing the tasks every time he got distracted.</p>	<p>II-A. Teaching individual words</p> <p>He asked the teacher and his group mates what unfamiliar words meant.</p>
<p>I-B. Obtaining praise and rewards</p> <p>The teacher and his group mates affirmed his performance.</p>	<p>II-B. Setting</p> <p>The teacher and his group mates told him where and when the events in the story took place.</p>
	<p>II-C. Characters</p> <p>He discussed who the characters of both stories were, including their relationships, feelings, and appearances, with the teacher and his group mates.</p>
	<p>II-D. Plot</p> <p>He discussed the plot of both stories, including what happened to the characters and their conversations with one another, with the teacher and his group mates.</p>
	<p>II-E. Theme</p> <p>He discussed the theme with his teacher and group mates, particularly what “hope” and “change” represented in the stories.</p>
	<p>II-F. How to create a semantic map</p> <p>The teacher and his group mates told him how to create a semantic map, including advice such as using different pen colours for emphasis, paying attention to common words used in both stories, and using wavy lines to distinguish his opinions from actual story content.</p>
	<p>II-G. How to write an essay</p> <p>The teacher explained specific writing techniques such as how to properly cite quotations.</p>
	<p>II-H. Rules for conducting small-group discussions</p> <p>The teacher intervened to resolve potential issues amongst the members of each small group. She encouraged all members to state their opinions during discussions.</p>
	<p>II-I. Building the story’s image</p> <p>The teacher and his group mates helped him visualise the story’s world. For instance, they asked him what his interpretation of the “leaden sky” was.</p>

Semantic map-making was the reason that Sato could receive various kinds of assistance. First, the semantic map makes it easier for the teacher to help the students because it creates a visual of the students' problems. For example, Sato's struggles clearly appeared on his semantic map when connecting the two short stories because he did not write anything on his map. When the teacher saw this, she talked to Sato and elicited the similarities from both stories: "The characters in both stories, especially Mrs. Yang from 'My Old Home,' were foolish." After that, the interaction shown in Table 4 occurred, and Sato decided on the centre word "change" as shown in Figure 3. This helped Sato to analyse how other characters changed in both short stories. In other words, Sato, who has difficulties understanding Japanese literary texts, gradually formed his understanding through making semantic maps and interactions with others.

Teacher: Did she say such things at the beginning? Do you remember how she used to be?
 Sato: Hmm. An old lady.
 Teacher: Huh-uh.
 Sato: A tofu seller.
 Teacher: A tofu seller. Yeah. Komachi (Japanese ancient poetess known for her beauty).
 Sato: Komachi
 Teacher: Yeah. You like komachi.
 Sato: Oh no no komachi
 Hada: (laughing)
 Teacher: See? Komachi is used to describe a beautiful lady, isn't it?
 Sato: Was she cute?
 Teacher: She was. That's why many people bought tofu from her store, didn't they? What about now?
 Sato: She got old.
 Teacher: She got old. It is one possible reason. But there are other reasons.
 Sato: Compass?
 Teacher: Her legs look like a compass and she demanded that the protagonist give her things in his home. In other words, she...
 Sato: She changed.
 Teacher: She changed.
 Sato: So, I will choose change as a center word.

Figure 3: Record of Sato's dialogue with his teacher

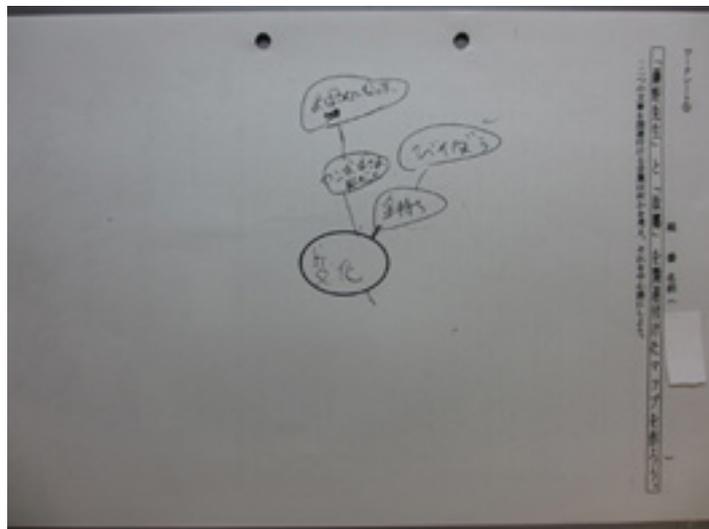


Figure 4: Sato's semantic map on what connected the stories

Semantic map-making also fosters story discussion at a deeper thinking level. As mentioned above, Sato decided the word “change” as a centre word but Sato’s group’s highest achievement student Koda decided the word “hope” as the centre word. For this reason, there were long interaction in Sato’s group during 9th lesson to decide the centre word. This interactions was important for Sato because he realised why “hope” could be the centre word, and it made Sato think about the relationship between “hope” and “change” and their meaning in the two stories as shown in Figure 5. As a result of these discussions, he used all levels of thinking in his essay about two stories as I mentioned in the analysis of Sato’s essays.

Koda: I think hope is best as the center word.
 ... (omission)
Koda: Hope.
Sato: Hope? (To Hada) He said hope.
Koda: We can extend change from hope.
Sato: (To Hada) What did he say?
Hada: Can we extend change from hope?
Sato: Do you think we can do that? Isn't it XXX? (inaudible)
Koda: No.
Sato: Does it make any difference?
Hada: No it doesn't.
Sato: Then isn't it better to extrapolate hope from change? Or hope from Lu Xun?
Hada: It seems strange to extend change from hope.
Sato: Hope and change. Hope means having a dream. So it's not change.

Figure 5: Sato and Koda's dialogue on the central theme of the two stories

Conclusion

This article described how a Japanese middle-schooler was able to deepen his understanding of Japanese literary texts through the creation of semantic maps in his group. The main advantage of this type of lesson was that Sato received 11 types of assistance through both semantic map-making and essay writing. By doing so, Sato could learn to participate in all levels of thinking to understand literary texts and word meanings beyond their dictionary definitions. This advantage is due to the main feature of semantic map-making—students write down their understanding of the text on the map by linking words. Because of this feature, Sato’s level of understanding and difficulties were clearly shown.

In addition, semantic map-making also fosters students’ discussion at deeper thinking levels by encouraging them to consider keywords in the story, such as when Sato and Koda had different opinions about the story’s keyword. From the viewpoint of values education, this means that semantic map-making, along with other activities could function as a tool to help students to understand different opinions.

References

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