

Using Thinking Tools in Collaborative Learning

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Abstract: The purpose of this research is to examine using a thinking tool in a social studies class. The author would like to determine if students' opinions changed through mutual communications while using thinking tools. This course included the concept of collaborative learning. In addition, thinking tools were used to facilitate students sharing their thought process and learning cooperatively. According to a prior study, teachers wanted to teach by providing more information. The author studied how students learn from each other collaboratively and by using thinking tools. The author observed 30 students at a public high school in Osaka, Japan. Worksheets that students used in their social studies class were analyzed to obtain data that showed how the students' opinions changed. After analyzing the data, the author found that after group work 1) students' opinions changed to new opinions and 2) the bases for their opinions increased.

Keywords: Thinking Tool, collaborative learning

INTRODUCTION

The purpose of this research is to examine the use of Thinking Tool in a social studies class that used collaborative learning. The author wanted to determine if students' opinions changed through mutual communications while using thinking tools.

The Ministry of Education, Culture, Sports, Science and Technology (2017) stated that elementary school course of social studies "must help children recognize their own worth and respect all others as being of great value and overcome the many social changes while cooperating with a variety of people."

According to the prior study by Toriyama and Shiota (2015), "When Japanese children meet foreign children, Japanese children have stereotype information that they developed earlier in their lives, so they cannot mingle well with foreign children." Therefore Japanese children cannot understand children from different cultures.

In addition, Okazaki (2017) stated that "Social studies teacher tend to only study as much detail as possible." The study of current society often does not use collaborative learning.

The author suggests using Tug-of-War as a Thinking Tool to facilitate discussion with children. According to the prior study by Nakajima and Sasaki (2014), "Tug-of-War illustrated opinion of conflict and used Post-It. This tool indicate the priority of opinions and facilitate children's discussion." By visualizing their thought processes, children can better understand the opinions of others and how this can transform their thinking.

METHOD

The author observed a social studies class and ask about 38 students in a fifth grade elementary school to complete a questionnaire. In this class at a public school in Osaka, Japan, the children discussed the future of food sufficiency rate in Japan. Students were asked to think about the problem of food sufficiency rates.

The author analyzed the use of the thinking tool, Tug-of-War, that included the use of collaborative learning. When using Tug of War, students are asked for their opinion of a concept. They write their opinions on a worksheet, then copy their response on Post-it Notes. They place their Post-its on a board to show if their ideas are positive, negative or in-between. Students can look at the Post-its, and visualize their thinking process. After placing their Post-its on the board, students discuss their opinions in a group. After the discussion, students write their group's final opinions on the board below the Post-its and write their that opinion on their worksheet. When students used Tug-of-War, they found it easy to express subtle positive or negative or neutral opinions.

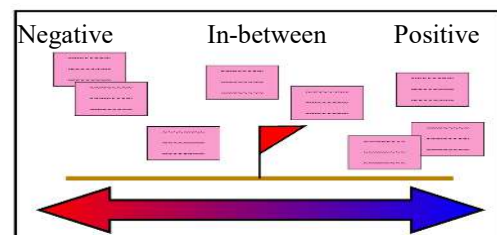


Figure1 Tug-of-War

The author examined the changes on their worksheet in student responses before and after their discussion.

Students completed a questionnaire at the beginning and end of the the course. Students also completed worksheets during the course. The author observed how children described what to do to raise the self-sufficiency rate in Japan, before and after using Thinking Tools. The author analyzed how the children's opinions changed in the pre- and post-tests.

RESULTS

The author analyzed the data and discovered that the children's opinions changed on the worksheets that they completed before and after using Thinking Tools. Tug-of-War can express subtle differences on the position where children put their Post-its so the thinking tools helped children understand the opinions of other students.

Some samples of student opinions are as follows:

- Student A's opinion was positive on the first worksheet, "Japanese food self-sufficiency rate is 3 percent, so I think Japanese food self-sufficiency is very good now." However Student B's opinion on the pre-worksheet was a subtly positive opinion "I think foreign-made food is safer than Japanese-made food, so I think Japanese food self-sufficiency is not good now"

- After listening to Student B's opinion, Student A's opinion changed to a subtly negative opinion. Student A said, " I don't know if the food is fresh or not fresh, but now people don't die from eating Japanese food, so I think that foreign food self-sufficiency is good."

In a prior study by Kurokami (2017), Thinking Tool were found to help students work together and think cooperatively.

CONCLUSION

The author discovered that students' thinking before and after group work changed with the use of Thinking Tools. After analysis of the data, the author found that after group work 1) students' opinions changed to new opinions and 2) the bases for their opinions increased.

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