

Assessment by Association Method of a Moral Education Lesson on a Local Topic in a Mixed-age Class

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異学年合同で地域素材を使った道徳授業の連想法による評価

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I A moral education lesson in a mixed-age class using a local topic

The mixed-age moral education lesson was carried out at Shimoda elementary school in South Fukuoka, Japan, on 25th February 2009. The 1st (6-7 years old) and 6th grade (12-13 years old) pupils attended the 60 minutes lesson together in pairs. The sixteen 1st graders, including one requiring special support, and the eighteen 6th graders sat in a circle facing each other.

The theme of the moral education lesson was respect for life. The intended goal of the lesson in 60 minutes was to learn various reasons for the importance of life, and the hidden purpose was to promote self-affirmation among the children.

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As a learning material we chose magpies, which are rare birds in Japan and live only in the districts of South Fukuoka and Saga prefecture. They are an emblem of the district and were a natural monument of Japan. Magpies are special and respected among the people in the district. It is said that magpies in Japan arrived from Korea at the end of 16th century. The bird is called in the district kachi-crow, which seems to be derived from the name 까치 (Kkachi) in Korean. The children of the elementary school can see a nest of magpies in a ginkgo tree in the school, and the 1st graders can observe the nest daily from their classroom. Therefore the learning material is local and close to the daily life of the children. The 6th graders studied for 15 hours about magpies and learned about the life relationship in the local district through the birds' eyes geographically, historically, and in relation to human life. At the end of the study the 6th graders had created a drama about baby magpies in the nest of the school tree, in order to relate what they had learned to the 1st graders. This 6-minute drama, insisting on the importance of life of the baby magpies, was used as a learning material in the moral lesson.

It is difficult to explain to a 1st grader about respect for the life of baby magpies from the point of view of rarity, or from a symbolic meaning of the bird, because magpies are, as far as the pupils are concerned, not rare and it would be difficult for them to understand their symbolic meaning. A 1st grader will understand the respect for life, because people treat them importantly and with respect. In other words importance of the lives of children will also be understood because people treat them importantly and with respect.

The drama shows how the lives of baby magpies are treated with care and respect by the parent magpies, pupils of the school and people in the district. The structure of the moral education lesson leads to reflective thought on the children themselves. The core point of a moral education lesson exists in the reflection on oneself.

The role of the 6th graders was to provide learning material and to support the 1st graders, i.e. listen to the opinion of a 1st grader, ask his/her reasons for that opinion, and to encourage her/him to express that opinion to all attendants. In summary, the 6th graders took care of the 1st graders. Therefore the 6th graders had little chance to express their opinions during the lesson.

II Children were satisfied

Figure 1 is the subjective evaluation of the 6th graders about the moral education lesson in 6 steps. The result in brief is that they were very pleased with the lesson.

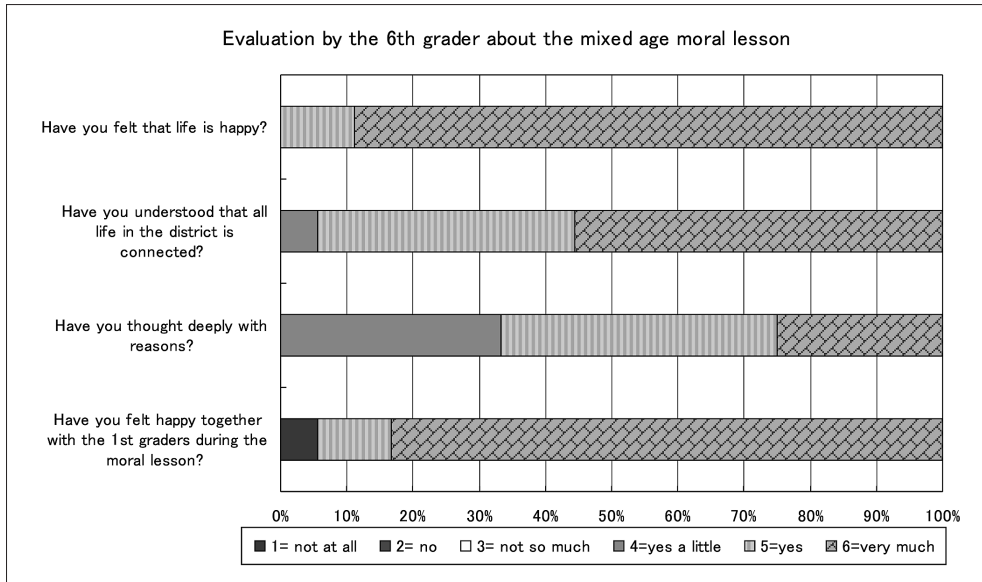


Figure 1 6 steps subjective evaluation about the moral lesson by 6th grade pupils

The results of the evaluation were as follows (Figure 1).

- 1) The 6 stage subjective evaluation reveals that the 6th graders were highly satisfied with the moral lesson. 88.9% answered “very much” to the question ‘have you felt that life is happy?’ while the remaining 11.1% answered “yes”. Therefore 100% of pupils answered that they felt happiness of life by the moral education lesson.
- 2) To the second question ‘Have you understood that all life in the district is connected?’, all the pupils were positive. 55.6% answered “very much”, 38.9% “yes” and 5.6% “yes a little”.
- 3) To the question ‘Have you thought deeply with reasons?’ 16.7% of the 6th graders answered “very much”, 27.8% “yes” and 22.2% “yes a little”.
- 4) To the fourth question ‘Have you felt happy together with the 1st graders during the moral lesson?’ 83.3% of 6th graders answered “very much” and 11.1% “yes”. However one of them (5.6%) answered “not at all”, so a teacher asked about it after the questionnaire. He answered that a 1st grader was not obedient to him.

In total the 6th graders felt pleased about the mixed age lesson, which they considered fruitful, even though they were not the main players of the lesson. Support can also be a fertile and satisfying activity.

III Association method

Association method¹⁾ here does not play an essential role in education itself as in Plato or Augustinus. It is not a philosophical explanation of recognition as in English Associationism. It does not measure a reaction time to find a hidden psychological sphere as described by Jung. The recalled words of the respondents are calculated here by means of information theory to create an association map.

Kent and Rosanoff, and other psychologists did not always measure a response time, but continued gathering first response words from an answerer. The tradition of recording one response word of a testee from one stimulus concept by association research was followed by many psychologists, such as Jung, Kent and Rosanoff, Entwisle, and Umemoto.

Association maps here are different from the so-called concept map, which is used as a learning method. White and Gunstone (1992, p.41 and p.156) for example, demonstrate the method to express conceptual relationships visibly. Many are using this type of conceptual mapping under a different name: idea map, mind map or topic map.

In this paper I propose a new method to combine fragments of recollection of a group into an association map, in order to see collective consciousness. I would like to use the terminology of "cue word", because the method of association does not depend on a stimulus-response theory of Pavlovian association, nor does it aim at a universally applicable theory of association. Association method is intended for use in a field, especially in education, where learning is organized in a way that encourages learners to focus on their task. A communication process of learning employing such a task should be described as clinical education. Furthermore, the result of learning should be assessed by what occurred in the learners' consciousness within a learning field.

An association map also intends to visualize relations of words. In an association map all response words in total are shown. It intends to calculate collective recall from a cue word, in order to assess the consciousness of a group. When we want to know the consciousness of people, it is better to gather many words answered by people. Response words of association are not yet selected and sorted into a sentence, so that all the factors in the mind remain as response words. Furthermore, there appear over 6 times more response words than written responses to a questionnaire (Kamizono, 2011, p.145).

Free association method in this paper draws out the following 3 points from words.

1. all recall of a person, conscious or unconscious
2. social consciousness and private recall, with positive or negative feelings
3. conceptual relations, either grammatical or relating to a matter

An association map here combines the recalled fragments by a method employing information theory. An association map clarifies the consciousness related to a cue word within a group. A rough outline of this theory is as follows.

1. Response words resulting from association show the cognitive sphere of respondents, including knowledge, feeling and thinking.

2. A word, to which many answerers responded, comes near to a cue word in the cognitive sphere of the respondents.
3. Association maps in different cultural areas can show differences in the way of response by words visually. Association maps reflect the consciousness of the cue word in each group.

Frequency of a response word is calculated as a probability to a cue word. Frequently appearing response words are considered as those which stand near to the cue word. Therefore frequently appearing response words are situated in the center of the association map. One response word by one person at the edge of the map, nearest to the outside of the whole circle, will be a personal recall, and can be a productive idea, which other people did not think of.

In an association map the distance of a response word from a cue word, or the distance from the center of a whole circle (D_i) is calculated in the following way:

$$D_i = -\log P_{pi} \quad (\text{bit}).$$

P_{pi} means how many answerers had written a certain response word:

number of a response word / number of all respondents.

Volume of association (A_i) is used as the growth of a circle of one response word:

$$A_i = -P_{pi} \log P_{pi} \quad (\text{bit}).$$

The radius of a response Word (r_i) is

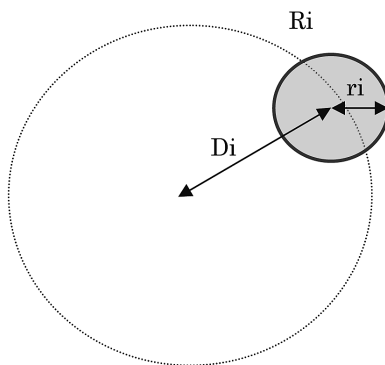
$$(r_i)^2 = A_i / \pi .$$

Entropy is calculated in the following way:

$$H = -\sum_{i=1}^z p_{wi} \log p_{wi} \quad (\text{bit}).$$

P_{wi} is the number of a response word among all the response words:

number of a response word / number of all the response words.



R_i : each Response Word

r_i : radius of a response word

D_i : Distance of a response word from a cue word.

D_i is described as distance from the center of a whole circle by an association map.

Figure 2 Structure of an Association map

IV Clinical moral education

I would like to explain about the consciousness of pupils clinically by means of an association map, from where we started our plan of the moral education lesson on a local topic in a mixed-age group. At the beginning the 1st graders knew about the importance of life, but the reasoning for it was supported by one basis. Association method at the end of December 2008 revealed the consciousness of the 1st graders as shown in Figure 3.

At first glance, Figure 3 is rather deserted. From the cue word <life>²⁾ 62.5% of them responded with words which belong to the category [important], for example the response word 'important' (43.8%). As regards the reason for respect and importance of life, they recalled a word 'one' at 31.3%. 6.3% said life is 'happy', but 12.5% replied 'I don't know' about life and even 6.3% felt life is 'scary'. The 1st graders said that life is 'important' but they 'don't know' about life and even found it 'scary'. Though they knew the importance of life, the reason for it did not appear rich and there was hesitation about life.

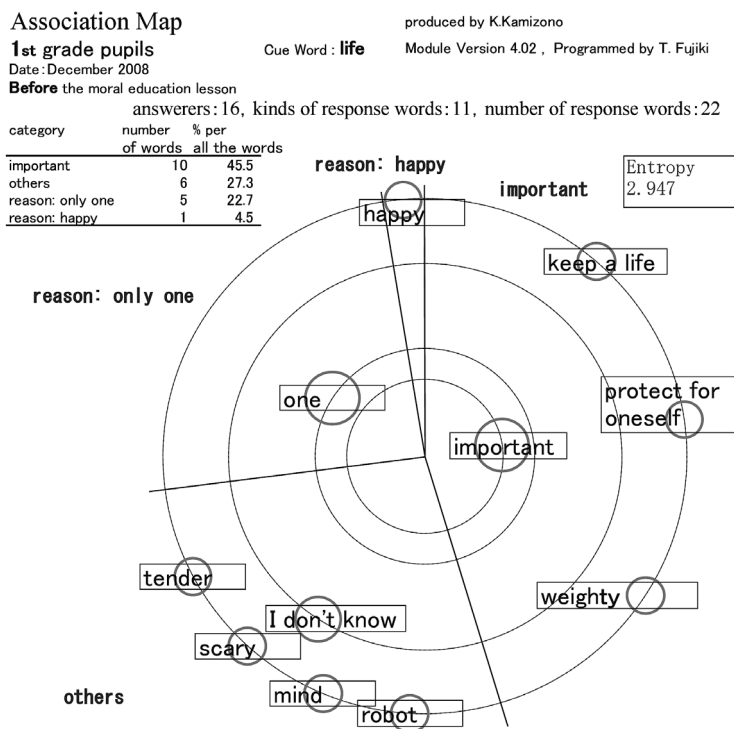


Figure 3 Association map about <life> by 1st grade pupils before the moral education

From the association map of Figure 3 we found that the 1st grade pupils needed an enrichment of reasoning about the importance of life in order to convince them of its importance. To know various reasons about life will help them in their future to keep on living, to be active in a community and to help others.

In Japan the rate of suicide is high, especially in the 20's generation. 49.3% of the deaths

of people in their 20's were caused by suicide in 2009. In 2009 the rate of suicide per 100,000 people was 25.8 in Japan, which is one of the highest rates in the world. The suicide rate in Korea is also not low, at 28.4 in 2009. The rate in England was 9.2 in 2008, and in Germany 9.4 in 2007. To prevent suicide especially among young people, moral education for the respect and importance of life is a key task in Japan. The enrichment of the reasons for it in many categories is not only the task of moral education for the 1st graders of the elementary school, but also of Japan itself.

What is needed here is not to tell the pupils about the importance of life in general, but that the importance of life should be connected to the respect and importance of oneself.

Self-affirmation among the Japanese young is low. 56.0% of Japanese junior high school pupils feel that they are useless, according to a 4-stage subjective evaluation carried out by the Japan Youth Research Institute in 2008. The rate of negative self-consciousness was the highest in Japan (56.0%), followed by Korea (41.7%), U.S.A (14.2%) and China (11.1%). In Korea 7.9% answered to the questionnaire 'I think that I am useless' "very much", and 38.9% "yes, rather so". However 20.8% answered in Japan "very much", and 35.2% "yes, rather so". (The number of samples of Japanese junior high school pupils was 807)³⁾.

According to Kamizono's research in Nagasaki prefecture for 12, 13 and 14 year-old pupils by association test, the second most frequent response word from the cue word <me> was 'fool' in December 2005. (The number of samples was 1,206.)

The situation of consciousness about oneself among the young in Japan should be improved. To support self-affirmation of the young is an urgent task of Japanese education.

The 6th graders of this school were not an exception. Negative self-image was dominant among the 6th graders by association test, as is seen in Figure 4.

The negative response words about <me> account for 30.2% of all response words, compared to 23.8% for affirmative words (Figure 4). For self-affirmative cognition of oneself, the consciousness of 6th graders should be promoted. It is the ultimate purpose of the process of moral education.

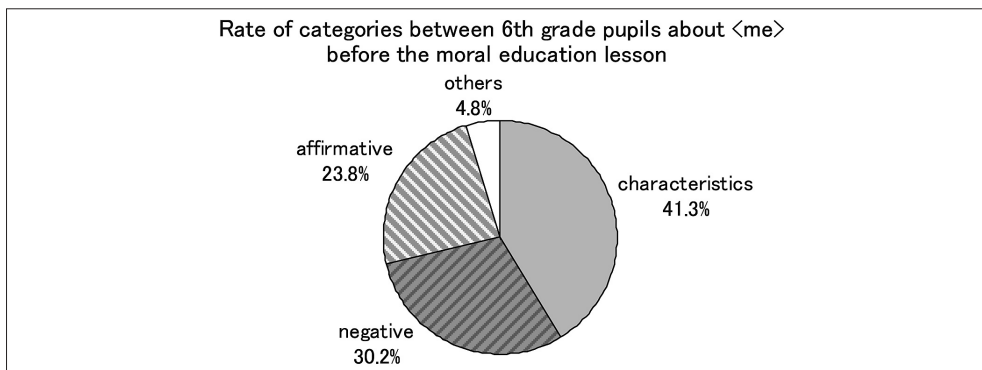


Figure 4 Rate of each category in the association map by the cue word <me> among 6th grade pupils

V Results

V -1 Reasons for the importance of life

After the moral education lesson the consciousness of the 1st grade pupils has changed as is seen in Figure 5, where many kinds of reasons appear and the consciousness of the importance of life is also increased.

In comparison with Figure 2, Figure 5 seems more full of words. Importance about life is increased by 2.8 times, i.e. 175.0% of pupils recalled the importance of life. Before the moral education lesson the category [important] was also dominant, but it accounted for just 62.5% of the 1st graders. This moral lesson gave the 1st graders a stronger impression about the importance of life.

Furthermore, they acquired many kinds of reasons for it. The categories of reasoning about the importance of life increased from 2 to 6 at the end of the lesson. The reasoning of mortality, commonality, continuity and similarity appeared newly. The number of words for reasoning increased 2.83 times. The scope of reasoning of the 1st graders became wider about the importance of life.

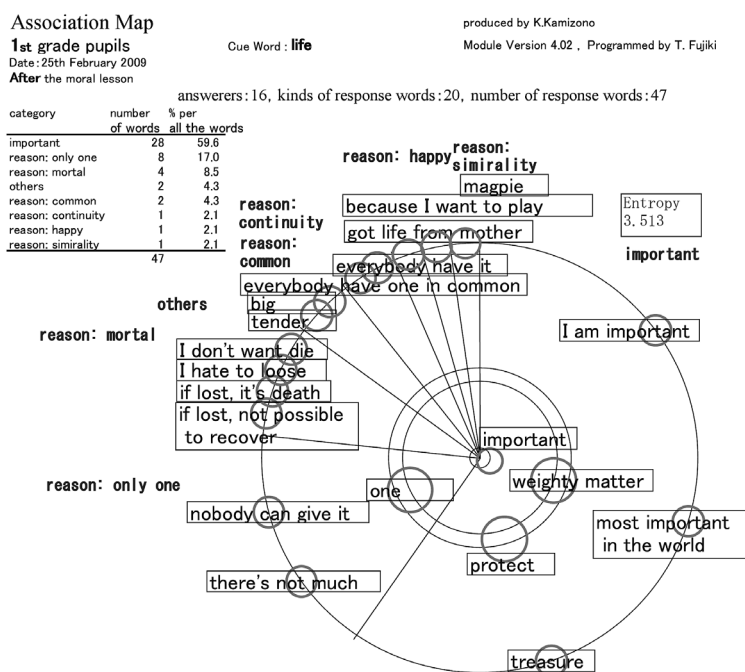


Figure 5 Association map about <me> by 1st grade pupils after the moral lesson

The mixed-age conversation supported the increase of categories about the importance of life. During the lesson the teacher did not take up the topic of mortality. However there was a reasoning of mortality in thought of the 6th graders from the

beginning. During the talk in pairs, 6th graders suggested the category. The 6th graders talked to the 1st graders not only about the category of mortality, but many kinds of reasoning about the importance of life. The following conversation is an example of what a 6th grader said to a 1st grader. The conversation was carried out from 39 to 44 minutes after the start of the lesson. The teacher asked to all “why is each of your lives important?”, and then the pair conversation began.

A 6th grader talked to a 1st grader as follows:

“Why is your life important?”

“Your mother and other people love you, don’t they? I know you are loved by all of your family.”

“There’s no other person like you. Well, there could be someone with the same name, but you are special.”

“Do you think your family loves you? Your elder brother plays with you. And your cousin also.”

“Do you think you are worthy of your family members?”

“Do you think you are the only person in this world?”

“Why do you think you are important to all?”

“Baby magpies are lovely. You are also lovely to all.”

“Your mother had you and brought you up with all her efforts. You are important, because you are the only one.”

“If you die, your mother will feel sorrow. Your friends will cry. If you are not here, all the people will feel sad.”

“How shall you express your opinion to everyone? Because my mother would feel sad? Because my mother brought me up with care, so my life is important? I am worthy because all the people around me treat me as a worthy person?”

“Let’s practice together.” “Please keep it in mind.”

What the 1st grader expressed to all as a result of their conversation was as follows.

“I am the only one. My parents and brothers have brought me up with all their efforts, so my life is important.”

During the conversation of the two, there appeared more categories about the importance of life than in the opinion expressed by the 1st grader. The talk in pairs of different developing stages enriched the categories of the 1st grader. If the talk had been carried out only between 1st graders, as in the standard lesson of school education, it would be difficult for them to attain many kinds of new categories as is seen in Figure 5.

In a typical lesson, which occurs in a clearly divided same-generation class, a 6th grader recalls a category, and then he/she raises a hand to express an opinion. However in the mixed-age communication in pairs, a 6th grader makes efforts to support her/his partner by means of many kinds of arguments. The 6th grader recalls and provides many reasons for the 1st grader, because he/she should support and care for his/her partner. The 6th graders made much more effort than in the standard lesson between themselves.

The total amount of words used in pair relationships in a mixed age lesson is much more than the amount of remarks in a standard lesson. Every pupil uses words related to the question by the teacher, and the conversation will develop further between the two pupils. All the participants talked about the theme of the lesson with each other and formed their opinions together. The method including peer relationships in a mixed-age class was productive in the moral education lesson.

Until now, in the area of moral education lessons, there have been two methods to achieve new categories, towards developing the thinking level of a divided grade. One is a “sermon”, another one is a dilemma method. When the “sermon” demonstrates a higher level of morality, it could be a suitable method to show a higher level of thinking, even though it is not popular among children. Some kinds of moral lessons are essentially a sermon, which uses a short story as learning material. The dilemma method intends to drive pupils into a dilemma situation and to let them attain a new recognition level of moral judgment.

Mixed-age communication will be another way to arrive at a new way of thinking. The origin of this method comes from play between children. In play children do not divide themselves by age. They play together in a mixed-age group⁴⁾. The method of mixed-age learning community can support a leap by participants to attain a new level of thinking in the area of morality. Morality and moral development can play a part in the mixed-age society of a child from the beginning. Such a mixture of different levels of development might cause difficulties for the same quality of transmission in a lecture by a teacher. However differences can be a basis for productivity in the area of morality.

In the mixed-age class there appeared more categories than the standard level of 1st graders, and more categories arose alone among the 6th graders. The productivity of the result of the moral education lesson is caused by the mixed-age nature of the lesson.

V -2 Self-affirmation

The pair relationship can be said to offer little profit to 6th graders, because they only care for the 1st graders. In fact the 1st graders were the main players in the lesson, when viewed from outside. However an association map shows that the lesson was meaningful for the 6th graders too. Figure 6 shows the rate of categories about <me> by the 6th graders after the moral education lesson. The association map reveals that their consciousness of themselves became more self-affirmative as a result of the lesson.

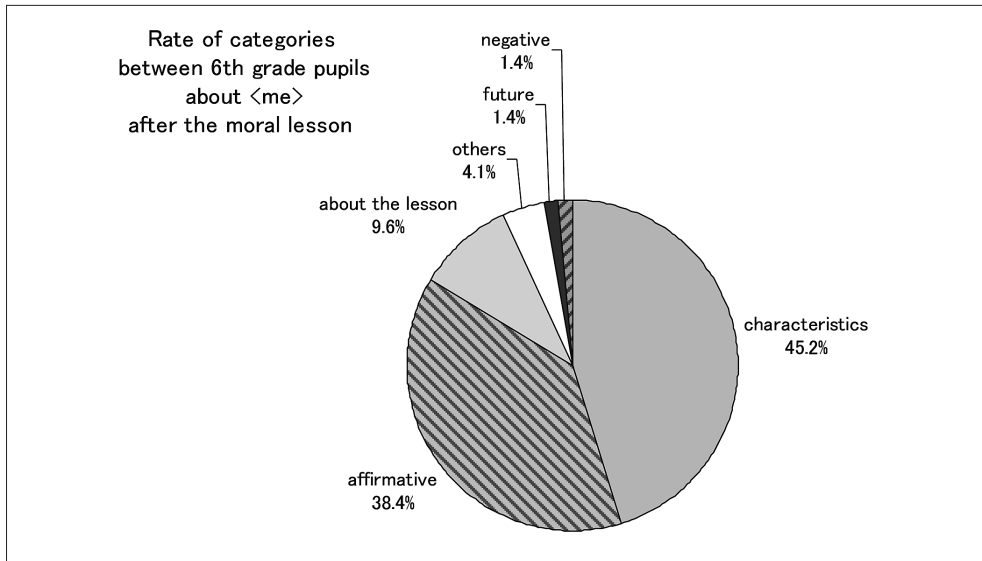


Figure 6 Rate of categories between 6th grade pupils about <me> after the moral lesson

In comparison with Figure 4, affirmative self-consciousness increased by 38.4% in response words and negative self-consciousness decreased by 28.8%. Negative comments on oneself decreased significantly ($p < .01$). Before the moral education process 93.8% of the 6th graders used affirmative words to talk about themselves, but at the end of moral education lesson this figure increased to 155.6%. At the beginning of the process, the most frequent answer by the 6th graders was 'sports' and 'a friend' (both 18.8% of respondents). At the end of the lesson the most frequent response is 'the only one in the world' (33.3% of respondents), and the next was 'life' (27.8%). Together with other response words including 'life', for example 'there is life' and 'I am living', the total response words including 'life' reaches 38.9%. Therefore the 6th graders thought about their life during the moral lesson, though they said nothing explicitly. There was no response word 'important' related to oneself before the process of the moral education class, but it appeared in the end of the lesson by 16.7% of respondents. The 6th graders reflected on themselves during the lesson about the importance of one's life and attained an affirmative consciousness of themselves.

VI Conclusions

- 1) The moral education lesson corresponding to the task of children, for which we can give the name of clinical moral lesson, is productive in bringing about an increase in reasons for the importance of life and in affirmative self-consciousness. The lesson, which tuned in to a need of children, showed productive outcomes, as seen in the association maps. The moral education lesson showed a productive possibility of clinical moral education.
- 2) The method, which combines different-aged children, is productive. As a result of the lesson the 1st graders could jump to a variety of reasons about the importance of life. The 6th graders could find an affirmative view of themselves during the process of caring for the 1st graders.
- 3) The association method to make an assessment of a lesson is effective in revealing what has happened in the consciousness of people in a group. It made clear the intended changes of the lesson and unintended or unseen changes in children's consciousness during the lesson.
- 4) I would like to add two more factors for the productivity of the lesson other than a clinical moral education lesson and a mixed-age class. Firstly, meaningfulness of the learning material, which is close to the daily life of children in the community. Secondly, effectiveness of lessons under a consistent principle of a school. In the school the purpose of achieving an affirmative self-consciousness and the method of a mixed-age friendship were combined through the school management. In the field of extra-curricula activities, the school promoted mixed-age friendships. The moral education lesson drew on these relationships as a learning method for a lesson. Furthermore, the task of self-affirmative awareness received consensus among the staff of the school after they understood the need for it among the pupils of the school.

Notes

- 1) The explanation and example of usage about association method is written in the book: Kamizono, K. (2011), Assessment of moral education lesson by association method -method of clinical education-, Kyoiku-shuppan, (Japanese)
- 2) Cue word is shown by < >, response word by ' ' and category by [].
- 3) Japan Youth Research Institute (February 2009), <http://www1.odn.ne.jp/youth-study/research/index.html>, page 14, referred 5th May 2009
- 4) Theoretically, for example, the zone of proximal development by Vygotsky, L.S., and situated learning and community of practice by Etienne Wenger and Lave Jean could be the background for the mixed-age learning community.

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