Mathematics learning in elementary school that integrates with nation's culture and integrity: a research trip in Japan

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Abstract. Japan is a country that respects the Nation's Culture and has Integrity that can be emulated. The problem was: What was the role of Elementary School teachers in increasing of Nation’s Culture and Integrity of their students through mathematics learning? The research method was a qualitative approach. Stages of activities: (1) Guided by a Partner Lecturer from IDEC of Hiroshima University, the UNNES research team conducted a class visit to the Elementary School (ES) in Hiroshima, namely Attached ES of Hiroshima. (2) Conducting observations, interviews, documentation studies, and FGD with the Elementary School teachers, IDEC students, and Partner Lecturer. The results: (1) Teachers and students have a high sense of Integrity in learning. (2) The teacher plays a role in preserving the cultural values of the Japanese nation. (3) Provision of mathematical problems associated with ethnomathematics and Japanese cultural products. Additional results: (1) In Japan applying the Problem Based Learning of learning model. (2) Teachers and students were very polite in getting along. (3) The condition of the school looks clean, healthy, and orderly.

1. Introduction
Implementing Character Education based on comparative studies in developed countries is a novelty, especially for character education in Indonesia. Researchers have conducted a comparative studies in Japan, the results of which are the basis for writing this article. For a country character education is very important. This is in line with the opinion of [1] who stated that character education is a primary need in the era of disruption. This shows that the graduates or the output of education is not only having the skills occupied but also more important is a strong character.

Japan is a developed country. This is evidenced by the spread of various products made in Japan spread throughout the world. Besides being a developed country, Japan is also a country that upholds the character value. So that the inculcation of character values has begun to be implanted early on. So that Japan is often used as an example in terms of character for other countries.

Indonesia as a developing country, of course, must learn a lot from other countries. One of them is Japan. According to [2], Japan is a country that is successful in instilling character values. This can be seen in how Japan integrates character values, both in substance, process, and environment that encourage or inspire children in developing good habits.
So, it is necessary to have a meaningful research on how to integrate character values in elementary schools in Japan. Through this article which is the result of research conducted in Japan provides an illustration of how Japan integrates character values, especially in the learning process.

Character is often associated with the term moral, ethical, moral, or value. While in terms, the character comes from the Greek, charassein, which means carving (to engrave). Meanwhile, according to [3] stated that the character is a way of thinking and behaving of an individual that is inherent in the characteristics of each individual.

Indonesia has defined character. [4] wrote that characters are typical values that are good. So that people who have a character that has unique values as well as reflected in the form of behavior. [5] stated that to build character in individuals, we need a strategic means, one of which is through education in the learning process. While [6] stated that education is an effort to develop students' potential optimally. These potentials include cognitive, affective, and psychomotor domains. Education is to transfer of knowledge and also as a means to shape students' personalities.

Character education is an education system that integrates values in accordance with national culture with aspects of knowledge, aspects of feeling attitudes, which are implemented towards God Almighty, self, society, and nation. While [7], character education is an effort to develop the potential of students with cultural values and national character in order to have values and character for themselves, and to apply these values in daily life in order to become good citizens. Furthermore, [8] had another opinion that character education is a national movement that aims to create a school environment that fosters students to possess ethical, responsible, and caring behaviors. Character education in the school environment not only teaches right and wrong, but instills good habits to students.

As a country rich in culture, a multicultural country, of course, has a strong character values in it. These values have been included in the Strengthening of Character Education (PPK). Furthermore, [9] concerning Strengthening Character Education provides the following understanding. Strengthening Character Education (SCE), hereinafter abbreviated as PPK, is an educational movement under the responsibility of the education unit to strengthen the character of students. The translation of each value in the Strengthening of Character Education is as follows.

**Religious value.** This religious character value includes three dimensions that are interconnected with each other, the three dimensions are the relationship of individuals with God, individuals with other individuals or neighbors, and individuals with the environment. **Nationalism values.** Nationalism values are characters that show concern for the language, social environment, culture, economy and politics of
the nation. Nationalist sub-values are attitudes that respect the culture of the nation itself, love the motherland, obey the law, and the culture of the nation. **Mutual Corporation Value.** Mutual cooperation value is an act that values the spirit of cooperation, builds communication and friendship, and provides assistance to people in need. **Independent Value.** The value of independent character is the attitude of not being dependent on others to realize your hopes and ideals, and be creative. **Integrity Value.** Integrity character values are behaviors that can be trusted in words, actions, and are able to maintain morale. The character of integrity includes an attitude of responsibility, active in social life, ready to respect others, and able to set an example.

The research was conducted at the Attached Elementary School of Japan. The formulation of the problem are as follows. (1) What was the role of the teachers in increasing of Nation’s Culture and Integrity of their students through mathematics learning? (2) How the teachers in Japan provide evaluations for character values integrated in the process mathematics learning? (3) How the teachers in Japan follow up on the evaluation results for the character values integrated in the mathematics learning process?

The objectives in this study include: (1) Identifying the role of the teachers in increasing of Nation’s Culture and Integrity of their students through mathematics learning. (2) Describing ways in which Japanese teachers provide evaluations for character values integrated in the mathematics learning process. (3) Get data on how the teachers in Japan follow up on the evaluation results for the character values integrated in the mathematics learning process.

2. **Methods**

2.1. **Research Approach**
In this research, the method to achieve the objectives is to use a research method with a qualitative approach.

2.2. **Research Subjects**
To achieve the objectives of this research, the subjects of this research are (1) Hiroshima University Attached Elementary School of Japan teachers or elementary school teachers around the Hiroshima University campus. (2) Hiroshima University Attached Elementary School of Japan students. (3) Parents of Hiroshima University Attached Elementary School of Japan students. (4) Leadership staff authorized to provide guidance to elementary school teachers in Japan. The selection of research subjects was based on an agreement between the UNNES Research Team and a Partner Lecturer from Hiroshima University.

2.3. **Data Analysis**
The data analysis in this study uses the rules of [10] and [11] namely: data collection, data reduction, data presentation, data interpretation, and drawing conclusions.

3. **Results and Discussion**

3.1. **Results**

3.1.1. **Ways elementary school teachers in Japan integrate character values.** The results of this study are based on data obtained at the Hiroshima University Attached Elementary School of Japan. After observing the data obtained about how elementary school teachers in Japan integrate character values in the mathematics learning process, including: (1) All students actively participate in learning activities at that time, the topic is Number Patterns. The class atmosphere is calm and conducive. Character values are
reflected through the attitude of students who are polite, orderly, and have integrity. (2) Japanese cultural identity is well preserved. This is an expression of a high sense of Nation’s Culture. When asking or answering questions, students stand politely. (3) There is no unnecessary conversation in class. Between one student and another students look polite and respect each other. (4) All school members such as teachers, employees, and students are disciplined with time. All present on time. (5) Nation’s Culture values observed include respect for the culture of the nation itself, obeying laws, and discipline. (6) The value of responsibility appear to be owned by students when working on questions and questions between the teacher and students. Means, the value of integrity has grown among students.

3.1.2. Ways ES teachers in Japan provide evaluations for character values. Based on the results of the study it was found that for the evaluation of character values integrated in the mathematics learning process, it was done explicitly. This means that there are no special judgments about characters. If in the learning process students are found violating, the teacher gives advice directly and asks not to repeat. However, in reality, students have not met the rules of the school. In addition, based on observations, interviews, and FGD, integrity scores were found, including: (1) No students, teachers, or employees who came late to school. (2) The atmosphere of the classroom is conducive and there are no students who speak alone while the learning process is ongoing. (3) When leaving the classroom, students come out in an orderly manner, waiting in line, and do not find students coming out of the class scrambling. (4) Students are responsible for books provided by the school.

3.1.3. Follow-up and the teacher's role in the evaluation of character values. Because there is no explicit score on the evaluation of character values, to follow up so that the character values remain strong, the following methods are carried out: (1) maintaining Japanese cultural values in daily life at school, (2) maintain conductivity and order in the implementation of learning in schools, (3) maintain the establishment of discipline and integrity among students, teachers, leadership staff, and education personnel in the Hiroshima University Attached Elementary School environment.

3.2. Discussion
Character is one thing that is very important for a nation. Large nations that are open are only seen in economic terms, or in terms of technology, but also visible in the character possessed by each individual in it. In this era, a lot of character values are starting to disappear because of the large number of Indonesians who violate them. Examples of these violations are often found in everyday life. Like breaking traffic signs, which are mostly done by students. There are still many students who skip school. There are still brawls conducted by students. Even at a higher level, namely corruption by officials is still the biggest violation in Indonesia. Therefore, character education, especially starting from the elementary school level is very necessary.

According to [12], every individual born has a good character potential. However, this potential must always be nurtured so that the character is always etched in the individual. Therefore, early coaching about character is needed, not only in the family environment but also in the school environment. Because the formation of the character of each individual is influenced by two factors, namely innate and environmental.

Japan as a country that is often used as a qibla in instilling the value of character to the younger generation. One of them is through education. Japan instilled this character value starting from the student in elementary school. As in the Hiroshima University Attached Elementary School which is an elementary school in Japan that upholds the value of discipline in forming the character of each individual who is in the school. Hiroshima University Attached Elementary School has carried out the initial education of instilling children's character in their development through concrete actions.
Pillars of character derived from universal noble values, among others: the character of God's love and all of His creation; independence; responsible; honesty; respect and courtesy; like help and help; mutual cooperation / cooperation; confidence; hard worker; kind and humble; and tolerance character. But the family also plays a role in the formation of character values in students. That is because the family is the first vehicle for students to get an education. So, the family should not be eliminated its role in shaping the character of students.

To forming the character of children, families must meet three basic requirements for the formation of a good personality. Namely, a sense of security, physical and mental stimulation. In addition, the type of parenting that parents apply to their children also determines the success of children's character education at home. [13] wrote that Japan has done well. Errors in parenting children in the family will result in failure in the formation of good character.

So that the character education process needs to be arranged systematically and implemented well. Therefore, also character education needs to be instilled since children begin to enter kindergarten, elementary school, and even college. In addition, the role of the teacher is also a key to the success of the character education process. According to [14] and [15], the teacher's failure in growing character in students, is because a teacher cannot be a good role model for students, cannot show and show character as someone who should be heard and followed. So, the teacher must be able to play a role model as a good role model, because it is not about the knowledge that will be taught to students, but about forming good character in students.

If the good character from Japan can be implemented in Indonesia, since elementary school students, even before elementary school, starting from the social environment to tertiary institutions, then the generation of Indonesian people will be human beings with character, who are ready to become the next generation of the nation. In applying character values, institutional support is also needed. Character education by teachers in schools needs to be supported by school / institutional guidance.

4. Conclusions

The way of the Hiroshima University Teachers Attached Elementary School of Japan integrates character values prevailing in Japan can be reported as follows. (1) All students actively participate in learning activities at that time, the topic is Number Patterns. The class atmosphere is calm and conducive. Character values are reflected through the attitude of students who are polite, orderly, and have integrity. (2) Japanese cultural identity is well preserved. This is an expression of a high sense of Nation’s Culture. The teacher uses Mathematics teaching aids by utilizing the surrounding environment in using the teaching aid. (3) When asking or answering a teacher's question, students stand politely. (4) The value of honesty and responsibility appear to be owned by students when working on questions and questions between the teacher and students. Means, the value of integrity has grown among students.

No special evaluation is given of character values integrated in the mathematics learning but: (1) maintain the values of Japanese culture in everyday life at school; (2) maintaining conductivity and order in the implementation of learning in schools; (3) maintaining the upholding of discipline and integrity among students, teachers, leadership staff, and education personnel within the Hiroshima University Attached Elementary School.

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